TEACHING ADULT ENGLISH LEARNERS:

USING METACOGNITIVE STRATEGIES

IN THE FOUR LANGUAGE DOMAINS

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Abstract

Metacognition is not always a consistent part of ESL/EFL classrooms but is a learning strategy that can boost student achievement outcomes, especially when paired with other learning strategies and self-reflective group discussions. Research (Huang & Newbern, 2012; Liu & Goh, 2006; Nakatani, 2005; Teng, 2019a; Teng & Reynolds, 2019; Vandergrift & Goh, 2003) has shown that explicit instruction of metacognitive strategies (MCSs) in the four language domains can increase L2 proficiency. This project presents an instructor workshop and resource materials that are designed to promote the explicit instruction and use of MCSs in the language domains in adult EL classrooms. Workshop activities include the use of MCSs within other learning strategies and promote the creation of self-reflection questions and classroom learning tasks that facilitate EL and instructor metacognitive thinking. The use of MCS inventories in workshop activities can allow instructors to gauge their metacognitive awareness and that of their students. A final instructor project promotes the cumulation and presentation of learning strategies, MCSs, activities, and assessment of EL learning.

Dedication

This project is dedicated to my husband who provides unfailing support through all of my educational pursuits, and who always encourages me to bloom, grow, soar, and succeed.

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I would like to thank my professors at Greensboro College for their encouragement, guidance, and support throughout my journey in this graduate program. Their dedication makes learning possible and is greatly appreciated.

Table of Contents

Page

Title Page i

Abstract ii

Dedication iii

Acknowledgements iv

Table of Contents v

Chapters

1. Chapter One: Introduction 1
2. Chapter Two: Literature Review 5
3. Chapter Three: Project Design 19
4. Chapter Four: Instructor Workshop 23
5. Chapter Five: Conclusion 94

Appendix A 97

References 120

Chapter 1: Introduction

As an instructor of adult English learners (ELs), I believe that it is beneficial to student learning to incorporate a variety of learning strategies in the classroom and to teach them to my students. ELs come from myriad educational backgrounds, so a mix of "how to learn" instruction can be very helpful. An effective learning strategy is metacognition, or thinking about cognition, which can boost student learning (Hattie, 2009; Wilson & Conyers, 2016). Metacognitive strategies (MCSs) help students organize their thoughts and tasks, manage, plan, and monitor their knowledge and output, analyze and assess their own work and comprehension, among other "meta" activities that promote learning (Chamot, 2009).

Furthermore, metacognition is just one part of the learning mosaic since there are many learning strategies that can be combined (O'Malley & Chamot, 2000; Vandergrift, 2003), and Macaro (2006) posited that learning strategies are the most effective when used in tandem or in sequence. For example, socio-affective strategies include partner and group work, or self-reinforcement after meeting a learning goal. Cognitive strategies include method application, recall, mental manipulation, and interaction with the learning material, for example, using repetition, note-taking, elaboration, and making summaries, predictions, or inferences (Chamot & Kupper, 1989; O'Malley & Chamot, 2000; Zhang & Goh, 2006). However, Anderson (2002, 2005) claimed that MCSs may be the most important strategies for L2 learning, and Pintrich (2002) reported that MCSs within the language domains can promote learning.

There are cognitive and socio-affective strategies mixed in with the MCSs in this project, but the main focus is on the use of metacognition in the four domains. Therefore, I am interested

in the use of MCSs in order to promote learning in the four language domains (reading, writing, listening, and speaking) for adult ESL/EFL students in higher education. Of course, metacognitive strategies can be used in any classroom setting, but the focus of this thesis is adult EL learning. Much research has been done on how to use MCSs in primary and secondary education, but there is a limited amount of research on the efficacy of the use of such strategies with adult learners (Cromley, 2005; Yanqun, 2019), so more research is needed in this area.

In the TESOL program at Greensboro College, I took a course about metacognition. I found it fascinating and very helpful information to know because the EFL courses at the community college, where I have been teaching for the past two years, incorporate metacognitive strategies for students. Then, a few months ago, I attended a continuing education class at the community college about the basics of metacognition. One of my classmates who teaches classes for paralegals told me that he had never used metacognition before in his classroom and was curious about how I use it as a tool to help my students learn. That conversation reinforced my agreement with the idea that as ESL/EFL teachers, we not only have a responsibility to educate our students, but also to educate and inform instructors who teach adult or college classes (curriculum or otherwise) about research-oriented strategies that can facilitate learning for non-native English speakers in their classrooms (Short et al., 2018). In fact, Veenman et al. (2006) reported that many instructors are not aware of metacognitive strategies that can be used to promote classroom learning.

One such research-oriented strategy is to teach students about the use of MCSs, especially since many North American academic-level student skills can be vastly different from those in another country. For example, students from other cultures may not have been taught a formal structure for writing or may have learned a structure different from that of Western

culture (Leki, 1992). Students also may not realize that plagiarism is considered to be unacceptable in the United States. In fact, in some ELs' cultures, plagiarism may be considered a compliment to the original author if their work is summarized and/or copied (Kaplan, 2005).

When learning of these differences in regards to North American-based academic skills and methods, ELs can create deeper understandings of new topics by using MCSs to discuss, write, or think about them. Additionally, students can otherwise engage in planning, monitoring, assessing, and self-managing their work, which can help students become more independent with their learning tasks and goals (Rahimirad, 2014). Furthermore, reading skills can vary from student to student. In any of my classes, I might see a range of educational and/or reading comprehension levels, as some students may have a college education or are pursuing higher-learning degrees in their countries, while other students may have quit school in elementary or intermediate levels. Teachers can instruct readers of all levels as to how to use MCSs to help students think about their cognition when they read, which can further comprehension and reading skills. Such MCSs can include engaging prior knowledge, generating questions, making predictions, and making inferences (Hall et al., 1999; Soto, 2019). Listening and speaking skills are also an important part of the language learning domains, and MCSs are useful tools to use so that ELs are aware of how to plan, monitor, assess, and self-evaluate what they hear and say when interacting in the classroom with the teacher, peers, or in the general public. Such strategy use is especially helpful in developing speaking skills for effective communication (Ghapanchi & Taheryan, 2012).

In my thesis project, I gathered metacognitive strategies that enhance learning in the four language domains with adult learners in college settings. These students may be in ESL or in EFL classes. My project includes a PowerPoint presentation for instructors in a workshop to

learn about MCSs to teach their students in their EFL/ESL classrooms. Participants will also learn about MCSs that they can use to reflect on their classroom experiences or teaching methods in order to evaluate task success and or to make adjustments to their teaching strategies. I also created a booklet for instructors to have as a reference and to use as a quick guide when teaching. The booklet has strategies in categories for each language domain, along with sample reflection questions or activities that can facilitate thinking about cognition. The booklet also contains references for MCS inventories and questionnaires that assess metacognitive knowledge and awareness. This overview of MCSs with ELs in the four domains is general and contains resources that allow readers or workshop participants to research more information as they wish.

Chapter 2: Literature Review

The four language domains are typically part of ESL and EFL classroom instructional content and are an important focus of adult language education programs with criteria for rigorous content (Parrish, 2019). Skills in listening, speaking, reading, and writing are necessary for ELs in academic, work, community, and social settings, and are essential to L2 fluency development (Nation, 2009). In order to help ELs gain L2 proficiency, it is important for instructors to teach effective learning strategy choice and their use in context as a part of the four domains (Chamot & Kupper, 1989; Pintrich, 2002). While successful students and those at higher learning levels report using many learning strategies (Griffiths, 2016, 2018; Wang & Han, 2017), not every student comes to class equipped with such knowledge (Pintrich, 2002; Wilson & Conyers, 2016). A learning strategy that can be taught and learned is metacognition, which has been reported to promote positive student achievement outcomes (Hattie, 2009, 2012; Pintrich, 2002; Plonsky, 2019) by fostering learning, memory, attention, comprehension (Chamot, 2009; Flavell, 1979; Pintrich 2002; Rahimirad, 2014; Wilson & Conyers, 2016), motivation, self-confidence, and task performance (Go & Hu, 2014; Vandergrift & Goh, 2012; Wilson & Conyers, 2016). In fact, Anderson (2002) reported that the use of metacognitive strategies (MCSs) may be one of the most important skills that L2 learners can acquire. MCSs help students understand and self-regulate their learning tasks and include task planning and preparation, monitoring, assessing, evaluating, correcting, and summarizing (Veenman & Elshout, 1999).

Metacognition

Metacognition is the ability to monitor and control one's thinking and is part of the cognitive process and, in the case of English learners, comprehension in speaking, listening, reading, and writing (Flavell, 1979). Metacognitive awareness is the realization of person, task, and strategy; in other words, the knowledge of one's cognitive abilities and that of others, knowledge of a task's difficulty and needed resources, and strategy choice that best fits one's learning goals (Flavell & Wellman, 1977; Zhang & Zhang, 2019). Metacognition also includes self-reflection, a process in which a student develops new thoughts and knowledge about learning or tasks, which can strengthen students' linguistic skills (Goh & Burns, 2012). Students can reflect on their comprehension, how and what they are learning, their strengths and weaknesses, and their strategy use so that students can have self-regulation, which is metacognitive control over one's learning process (Anderson, 2005; Chamot & Kupper, 1989; Efklides, 2008; Hattie, 2009; Teng, 2019a; Vandergrift & Goh, 2016; Veenman & Elshout, 1999). Self-regulation is interconnected with the use of MCSs (Zheng & Zheng, 2019), and is a student's conscious effort in planning and setting goals, choosing and modifying resources and strategies, gauging progress and task performance, and gauging learning and the effectiveness of strategy use (Boekaerts, 1999; Efklides, 2008; Hattie, 2012; Kuhl & Fuhrmann, 1998; Macaro, 2006; Pellegrino & Hilton, 2012; Plonsky, 2019; Zimmerman, 2010). Self-regulation can lead to increased motivation, better study habits, and improved learning independence and behaviors (El-Sakka, 2016; Pellegrino & Hilton, 2012). In contrast, students who do not self-regulate tend to rely more on teacher and textbook input and may be less-skilled learners who tend to have lower outcome scores than do independent learners (Teng, 2019a).

MCSs in Classrooms

The use of MCSs has benefited students at all stages of learning but especially in settings with beginning students or learners with low prior education levels (Bozorgian, 2012; Hattie 2009; Huang & Newbern, 2012; Vandergrift, 2003; Veenman & Elshout, 1999; Wilson & Conyers, 2016). In fact, while higher-level students frequently use various learning strategies to understand and complete tasks (Griffiths, 2016, 2018), habitually successful students consistently use MCSs (Chamot, 2005; Pintrich, 2002; Sheorey & Mokhtari, 2001), which can and should be included in classroom content instruction and tasks (Chamot, 2009; Lee & Mak, 2018; Pintrich, 2002; Wilson & Conyers, 2016). MCSs are especially beneficial to student achievement and satisfaction when paired with other learning strategies or activities to maximize learning (Griffiths, 2018). Pintrich (2002) claimed that students who know about MCSs are more likely to use them in classroom activities and while studying in order to aid in memory and recall tasks, and it is this knowledge that heightens classroom learning and performance. However, some studies reported that while students may have awareness of MCSs, ELs do not always know why, when, or how to use them, especially at beginning or intermediate L2 learning levels (Lee & Mak, 2018; Nakatani, 2005; Schraw, 2002; Vann & Abraham, 1990; Wang & Han, 2017).

Researchers (Hattie, 2009, 2012; Pintrich, 2002; Plonsky, 2019; Wang, et al., 1990) argued that the use of MCSs in classrooms has a significant effect on student achievement and can positively impact learning and educational outcomes, especially with explicit instruction and practice (Grenfell and Harris 2017). Instead of exclusively focusing classroom instruction on the language itself, EL instructors can facilitate student independence and more efficient L2 learning by promoting the process of acquiring another language with MCSs (Anderson, 2002, 2005).

Yet, metacognition has not had a prominent or consistent presence in learning venues (Vandergrift & Goh, 2012; Wilson & Conyers, 2016; Zimmerman, 2010), perhaps due to a lack of pedagogical knowledge (Hartman, 2001). This lack of MCS instruction suggests that many classroom instructors omit effective strategies that can teach students how to self-regulate and achieve learning or task goals. As such, it is important for EL instructors to know about and include instruction on MCS awareness and use through self-regulation in all levels of adult EL classrooms to promote domain proficiencies. Furthermore, studies suggest that through metacognitive scaffolding, students can significantly improve learning outcomes in language domain tasks through collaborative peer discussions in order to facilitate MCS use, which can also promote independent learning (Liu & Goh, 2006; Nakatani, 2005; Swain, 2005; Teng, 2019a; Teng & Reynolds, 2019; Vandergrift, 2003). Instructors who explicitly instruct MCSs in order to teach adult ELs to self-regulate and how to think about, monitor, plan, and evaluate their learning can boost student independence, confidence, motivation, performance, and proficiency in the four language domains.

The Four Language Domains

Listening.

Listening proficiency is a goal for many adult ELs; however, many ELs may have limited understanding of aural texts, minimal knowledge of vocabulary, and poor skills in key word and idea identification due to limited access to L2 aural input and practice (Ghapanchi & Taheryan, 2012; Liu & Goh, 2006). ELs may also report anxiety during listening tasks due to a lack of control over the listening method (Goh & Hu, 2014; Liu & Goh, 2006; Vandergrift & Goh,

2012). Students may also believe that they do not possess the fundamental skills for successful listening comprehension due to the necessary quick comprehension of vocabulary, intonation, syllable stress, and colloquialisms in speech (Brown, 1990; Graham, 2006; Liu & Goh, 2006). This linguistic complexity does not readily allow for listening to be learned via passive listening and conversation (Vandergrift & Goh, 2012); therefore, listening activities are more productive if they are paired with MCSs to facilitate learning in content areas and in task-based learning (Graham, 2006; Pellegrino & Hilton, 2012), which can improve motivation and student self-confidence (Graham, 2006). Use of these strategies can also enhance listening comprehension, awareness of listening difficulties, and self-regulated learning that can promote L2 acquisition (Liu & Goh, 2006; Vandergrift & Goh, 2012).

To illustrate the benefits of MCSs, in a study with college-level beginning L2 learners, Vandergrift (2003) reported increased student listening skills and motivation after using prediction in a teacher-led lesson on grammar combined with MCSs that included planning, selective attention, problem-solving, evaluating, and monitoring. Prior to the unit listening task, students made predictions, then had three listening opportunities to identify difficult concepts and to compare understandings and predictions with classmates. Students then completed self-reflections in journals and pair-reflections on the listening activity. The results of the study showed that through collaboration, students were able to make more predictions and had increased success with use of MCSs as measured through journaling. Students also had more attention and comprehension, and the increased ability to anticipate and to listen for particular words or main ideas rather than attempting to translate every word (Vandergrift, 2003). The results of this study suggest that if teachers explicitly teach MCSs with listening skills, beginning

students can work in pairs or groups for successful implementation of strategies to facilitate advancement with proficiency skills.

Likewise, Liu & Goh (2006) used the same teacher-led process from Vandergrift's study (2003), but preceded it with a questionnaire that gathered intermediate-level adult ELs' use and knowledge of listening strategies. Students also participated in self and pair reflection. Then, the researchers facilitated the use of MCSs in a student-led listening process in which the students listened to passages of interest in groups, made listening goals and predictions, anticipated problems, and chose listening strategies. The groups then discussed meanings, main ideas, difficulties, and evaluated how well their strategies worked and planned for future strategies. In reflections, the students reported using MCSs such as organization and preparation for listening, selective and directed attention, and monitoring. The researchers found that like Vandergrift's (2003) study, after the teacher-led listening activities, the students showed increased listening skills and comprehension. However, Liu and Goh (2006) also reported that the students showed greater motivation and gains in comprehension and listening skills with the student-led listening tasks, along with a greater variety of listening techniques and methods as seen in journals and in group discussions. The researchers also pointed out that the guided learning prior to the student-led activities may have allowed for greater student comprehension than if the students had not been instructed in strategy use. It appears that the students used discussions to obtain input from their peers and were better able to negotiate meanings and strategy use through collaboration (Liu & Goh, 2006).

Since the ability to have conversations with others is an essential part of L2 development, discussions are an important part of listening skills to indicate comprehension and for clarification. Additionally, the use of MCSs in speaking activities can promote proficiency in

both listening and speaking, as reported by Ghapanchi and Taheryan (2012). They found that these proficiencies among intermediate to advanced university-level EFL students were significantly correlated with grammar and vocabulary knowledge, and with metacognitive knowledge, as was MCS use. Not surprisingly, listening and speaking skills were also significantly correlated.

Speaking.

L2 speaking proficiency is a goal for many adult ELs, but classroom speaking activities may oftentimes focus on monologues or writing rather than interactional conversation (Goh & Burns, 2012; Nakatani, 2005; Sabnani & Goh, 2020). In addition, speaking tasks may lack an emphasis on accuracy, or may not have the academic rigor and content that would prepare ELs for workplace or school communication expectations (Goh & Burns, 2012). However, L2 speaking skills are not easily passively learned during reading and writing tasks and should be taught via explicit instruction (El-Sakka, 2016), which encourages student motivation and independence and also facilitates proficiency through a focus on effective communication (Coultas, 2012; El-Sakka, 2016; Sabnani & Goh, 2020). Furthermore, when combined with metacognitive awareness of speaking strategies, explicit instruction helps to promote both rigor and student achievement (Hattie, 2009; Sabnani & Goh, 2020). For example, Panggabean and Triassanti (2020) found that intermediate-level EFL students who learned how to use MCSs for speaking skills were more independent with learning tasks, and had increased motivation, outcomes, and proficiencies in oral presentations. Students reported more self-awareness of tasks, available strategies, their strengths and weaknesses in oral communication, and of their learning processes (Panggabean & Triassanti, 2020).

Furthermore, ELs can develop their L2 conversational skills as they adjust their output with feedback from others who request clarification, ask questions, and negotiate meaning (Goh & Burns, 2012; Long, 1983, 1996). This output adjustment and feedback can help speakers pay attention to the accuracy and comprehensibility of their speech and can facilitate L2 acquisition and automaticity (Mackey, 2007; Swain, 2005).

For example, Nakatani (2005) conducted a study with intermediate-level EFL students in college who had limited L2 speaking skills such as difficulty discerning how to focus on their spoken words, and on which parts of their speech to focus. These ELs also lacked experience using strategies to facilitate conversation. Students in an experimental group (EG) received explicit instruction on MCSs to promote their conversational skills and awareness of the learning process. In partner discussions, the students could select and use speaking strategies such as asking for help or reiteration, checking clarification or understanding, rephrasing, using fillers to gain extra time for response, or paraphrasing and affirming understanding. The students also wrote in journals to plan and reflect on their conversations using MCSs. The instruction for MCSs with conversational speaking strategies included a warm-up reflection on earlier lessons, task awareness, planning and monitoring strategy use, and self-evaluation of student performance and use of strategies. A control group (CG) participated in conversations without MCS instruction, but spent more time communicating in pairs and in groups than the EG. Both groups completed pre and post assessments with recordings in order to gauge improvements in speaking skills such as fluency, dialog flexibility, rate of speech.

Nakatani (2005) reported that on the post-test, the EG had higher oral production rates and proficiency scores than the CG, which had less strategy awareness and increased instances of conversation abandonment, even though the CG had more student collaborations and

discussions. The study found that the EG used the instructed speaking strategies in combination with MCSs to aid in comprehension and interaction between students. Prior to the intervention, these students were most likely to drop out of conversations. After the intervention, the students reported increased confidence, strategy awareness, and knowledge of strategy use for planning, self-correction, and self-assessment to improve their speaking skills in conversations and interactions. The researcher concluded that group discussions about learning tasks do not necessarily translate to higher student learning outcomes, but when paired with MCSs, student collaboration was significantly correlated with increased proficiency. Also, through metacognition, the students in the EG learned which strategies to use and how to use them (Nakatani, 2005).

Reading.

The use of MCSs with reading activities in the classroom can also promote student learning outcomes at all reading levels. Adult ELs may consider reading to be a difficult task (Huang & Nisbet, 2012), especially if their L1 uses another alphabet system or script (Nation, 2009); however, reading is an essential part of language acquisition and proficiency. It is a source of authentic input and practice that can facilitate grammar and vocabulary knowledge **(**Eskey, 2005; Harmer, 2007; Nation, 2009) which is vital to reading comprehension and motivation (Garza, 2016; Teng & Reynolds, 2019). Even though ELs in any classroom may be at diverse levels of reading proficiency, instructors who explicitly instruct MCSs with reading activities can enhance learning and reading comprehension at various levels, e.g., advanced (Cubukcu, 2008; Rastegar et al., 2017), intermediate (Rusciolelli, 1995; Teng & Reynolds,

2019), or beginning (Huang & Newbern, 2012), especially in group work (Huang & Newbern, 2012; Teng & Reynolds, 2019).

Student collaboration with the use of MCSs in a group setting was shown to have positive outcomes in an adult EL reading class and facilitated student advancement to higher L2 proficiency levels (Huang & Newbern, 2012). The study was implemented with an experimental group (EG) and a control group (CG), each with a mix of beginning, high-beginning, and intermediate adult ELs with diverse L1 educational backgrounds. The students participated in pre and post tests for reading and vocabulary and had MCS instruction for the EG. Reading strategy training for both groups included teacher think alouds, noticing important ideas, previewing (monitoring) text organization, scanning for gist, rereading, guessing meanings of novel vocabulary, using background knowledge, and self-evaluation. Students worked in pairs, in groups, or engaged in classroom discussions of strategy use and self-reflections after completing questionnaires about their impressions of the MCSs and their metacognitive awareness. The results showed that the EG had higher posttest scores in all levels, but especially at the beginning level, than did the CG. The EG also reported increased motivation to read and showed strategy preferences for noticing, rereading, and guessing. Huang and Newbern (2012) concluded that explicit instruction of MCSs can be especially beneficial to beginning students and also promotes strategy awareness and use. The researchers also noted that ELs with minimal language skills may also have poor academic skills and that classroom instruction of MCSs is needed in order to promote learning.

Similarly, Teng and Reynolds (2019) also reported that student collaboration is beneficial to promote L2 acquisition with the use of MCSs. In a study with freshman intermediate-level EFL college students, who were majoring in science and technology, the researchers gave ELs a

reading task in one of four conditions: Group or individual work, and with or without MCSs. The students participated in pre and post-tests for assessments of comprehension and vocabulary, and reflected on their comprehension of the text either individually or in groups. The MCSs for reflection included prompts for planning, monitoring, and evaluating the reading, selecting strategies and creating goals for the reading, and organization and evaluation for reading comprehension.

Other MCS prompts for reflection promoted students' awareness of their strengths and weaknesses in reading tasks and strategy knowledge. The instructors only gave assistance to students when asked. The researchers reported that the students who worked in groups had the highest post-test scores. For example, the group with MCSs instruction had the greatest, significant improvements in comprehension and vocabulary knowledge, followed by the group without MCSs intervention (Teng & Reynolds, 2019). The individuals who used MCSs during discussions and tasks had significantly higher scores than those individuals without MCSs, who also had the lowest learning outcomes. With the use of MCS for group activities, students were able to make advances in reading skills through self-regulation and demonstrated increased reading engagement (Teng & Reynolds, 2019).

Writing.

Writing proficiency in English is often a difficult task for ELs, especially if students have limited opportunity for L2 input (Costley et al., 2020). Even in students' native languages, writing requires advanced cognitive processes, which can make the task challenging (Costley et al., 2020; Griffiths, 2016; Teng, 2019b). Teng(2019b) pointed out that cognitive processes such as comprehension, monitoring and assessing difficulty levels, planning, organizing, monitoring

progress, and task assessment, are connected to metacognition during writing. In fact, Teng (2019b) found a positive correlation between metacognitive regulation and successful writing performance outcomes, specifically, when students had metacognitive awareness of their strengths and weaknesses and were able to self-regulate and choose appropriate writing strategies. Furthermore, students who consistently use MCSs and self-regulation maximize their critical thinking skills (Teng, 2019b; Teng & Zhang, 2016), especially in group work activities (Teng, 2019a).

For example, Teng's (2019a) study of three groups of adult university English learners examined the effect of MCSs on writing outcomes. The first group (G1) received instruction on giving group feedback and participated in group discussions of writing tasks. Another group (G2) received instruction on how to create arguments and completed individual self-reflections on their writings. Both G1 and G2 received MCS instruction for reflection on their knowledge of the task and how they planned to write, monitor for clarity, and select and use writing strategies. G1 also received instruction for reflection that included reading a classmate's writing, checking for clarity, and for correctness, as well as proposing modifications. G2 checked, monitored, and modified their own writings for sound arguments and conclusions. A control group (G3) received no MCS instruction, but had lessons on writing formats and skills, creating arguments and explanations, and handling difficulties in writing. The students in C3 also worked in groups (Teng, 2019a). The instructors did not provide direct answers to student questions, but instead gave reassurance that students were engaged in sound writing arguments, explanations, logic, and peer feedback. The instructors also modeled a writing task and discussed what kinds of problems they may have when writing. In order to gauge metacognitive awareness, the researchers administered pre and post-study questionnaires and the students completed journal

prompts about their perceptions of metacognition, the writing task, and their writing performances (Teng, 2019a).

The results of Teng's (2019a) study showed that the groups classified as G1 and G2 had higher gains on writing tests (when comparing pre and post-tests) than did the control group. Interestingly, G2 reported knowing which MCSs were important for the writing task but expressed confusion as to when and how to implement the strategies. Group G3 reported no awareness or use of MCSs at all in their writing tasks. Also, the results of a delayed post-test one month after MCS instruction showed that G1 had better self-regulation, retention of MCss, and higher scores than the other two groups. Teng (2019a) concluded that with MCS use, student collaboration may facilitate group awareness of metacognitive control over the writing process and may prompt richer reflections, elaboration, and error corrections from students than if they engage in individual writing tasks or do not use any MCSs in learning tasks (Teng, 2019a).

Summary

The use of MCSs in the instruction of the four language domains is helpful for ELs, but MCSs have not been a consistent part of or may not be included in classroom instruction due to a lack of pedagogical knowledge or awareness of such strategies, especially within the four language domains (Goh & Burns, 2012; Liu & Goh, 2006). However, even though some students may be familiar with MCSs, many ELs may not have awareness of these strategies or how to use them in learning tasks, especially beginners or students with low English proficiency levels (Huang & Newbern, 2012; Lee & Mak, 2018; Nakatani, 2005; Schraw, 2002; Teng, 2019a; Teng & Reynolds, 2019; Vandergrift, 2003; Wang & Han, 2017; Wilson & Conyers, 2016). Since several studies show the effectiveness of explicit MCS instruction and use, especially in

collaborative student groups, and correlation with higher student outcomes within the four domain tasks in combination with other learning strategies (e.g., Huang & Newbern, 2012; Liu & Goh, 2006; Nakatani, 2005; Teng, 2019a; Teng & Reynolds, 2019; Vandergrift & Goh, 2003), it is beneficial to highlight these outcomes and to provide examples of classroom activities with MCSs that can foster EL learning in reading, writing, speaking, and listening. In the next section, such activities and strategies are discussed.

Chapter 3: Project Design

This chapter describes the rationale of a workshop for instructors of adult ESL/EFL students on how to explicitly teach, promote, and use metacognitive strategies (MCS) in the four language domains, which are important aspects of language instruction and L2 proficiency in reading, writing, listening, and speaking (Nation, 2009).

The use of learning strategies is imperative to foster L2 academic achievement (Pintrich, 2002), but not every student is aware of such strategies (Wilson & Conyers, 2016) or how to use them (Lee & Mac, 2018; Nakatani, 2005; Pintrich, 2002; Schraw, 2002; Vann & Abraham, 1990; Wang & Han, 2017). Teachers may use many methods to promote learning, but metacognition, thinking about cognition (Flavell, 1979), has not always been consistently used in classrooms (Vandergrift & Goh, 2012; Zimmerman, 2010). Metacognition includes planning, monitoring, evaluating, and reflecting on one's learning activities (Veenman & Elshout, 1999) and is a self-regulatory strategy that can have a significant impact on student learning (Hattie, 2009, 2012). Furthermore, the use of MCSs by teachers prior to, during, and after classroom activities can promote instructor development and can boost the efficacy of instructional methods, along with self-reflection of the instructional process (Hartman, 2001; Jiang et al., 2016); however, Veenman et al. (2006) pointed out that teachers may not be aware of these strategies. The explicit instruction and use of MCSs facilitates student achievement, motivation, and independence when used in context and with the four language domains, and especially when combined with other learning strategies (Griffiths, 2018) and in group work and discussions (Liu & Goh, 2006; Nakatani, 2005; Swain, 2005; Teng, 2019a; Teng & Reynolds, 2019; Vandergrift, 2003).

The workshop format promotes explicit instruction of MCSs and group work and includes a reference guide handout of resources for instructors and a PowerPoint presentation. Workshop participants can partake in activities with MCSs that are designed to promote both student and instructor learning and development. For example, the reference guide provides information about MCSs that can be used in the four domains to promote EL academic achievement. The guide also contains a list of research-based, strategy-use questionnaires, which are useful to ascertain students' reported learning behaviors that can inform classroom instruction (Balcikanli, 2011; Goh & Hu, 2014; Huang & Newbern, 2012; Kallio et al., 2017; Liu & Goh, 2006; Mokhtari & Sheorey, 2002; Oxford, 1990; Schraw & Dennison, 1994; Teng 2019a; Teng & Zhang, 2016; Vandergrift et al., 2006; Zhang & Goh, 2006). A metacognitive awareness inventory for instructors is also listed and can encourage teacher self-reflection and development (Balcikanli, 2011; Jiang et al., 2016). The reference guide is intended to facilitate lesson and activity planning with MCSs and provides easy access to research-based metacognitive tools to foster classroom learning.

The workshop activities in the presentation also focus on individual and group work to inform teachers how to explicitly teach and implement MCSs with various learning strategies. Additionally, the presentation gives an overview of the use of various questionnaires in the four language domains so that instructors can gather information about students' metacognitive knowledge and use of strategies, which is a part of explicit MCS instruction (Chamot, 2005). Participants will learn how to instruct and model strategy use, and how to facilitate MCS identification, labeling, selection, and practice so students can reflect on their strategy choices and outcomes in order to foster growth and progress (Chamot, 2005; Pintrich, 2002). Veenman and Elshout (1999) pointed out that there is a difference between knowing about and using

MCSs to increase learning. For example, a student's metacognitive awareness can be gleaned from questionnaires, but this awareness may not necessarily translate to the use of MCSs. Therefore, explicit instruction is necessary, and in order to make these strategies an integral part of learning, teachers can model the use of MCSs while thinking aloud (Chamot, 2005; Pintrich, 2002). An instructor's process of verbalizing how to plan, monitor, and assess tasks while performing them can have positive effects on student achievement (Chamot, 2005; Pintrich, 2002; Schraw, 2002; Zimmerman, 2010). Students who practice strategies in pairs or groups can further model strategy use. Schraw (2002) argued that students are often better models than teachers, as students use strategies and tools in similar learning levels as that of other students. Thus, group work is essential to this learning process.

Researchers (e.g., Huang & Newbern, 2012; Liu & Goh, 2006; Nakatani, 2005; Teng, 2019a; Teng & Reynolds, 2019; Vandergrift & Goh, 2003) have posited that group work allows ELs the opportunity for collaborative learning with diverse input and prior knowledge, and that the use of MCSs within groups facilitates cognitive skills, reflection, elaboration, and self-regulation more so than in individual student work. The collaborative exercises for instructors in the workshop serve as an example of how to use MCSs in group tasks with students, and how to promote independent and self-regulated learning as a part of the metacognitive process. The presentation outlines how MCSs are used in each domain and/or facilitates the discussion of various strategies or participant-group creation of activities that can be used for teaching and learning MCSs in the four domains.

When instructors collaborate to learn from each other, they engage in a "deconstruction and reconstruction of knowledge" (Prytula, 2012, p. 113) and it is this process that allows group learners the opportunity to forge deeper understandings, create new ideas, methodologies, and

practices. Teachers who are metacognitively aware can use their knowledge to promote personal, colleague, and student learning (Jiang et al., 2016; Kallio et al., 2017; Prytula, 2012). Furthermore, instructors must know how to analyze, plan, monitor, and evaluate learning tasks to maximize student outcomes, and instructor metacognitive awareness is a fundamental basis of this knowledge (Jiang, et al., 2016).

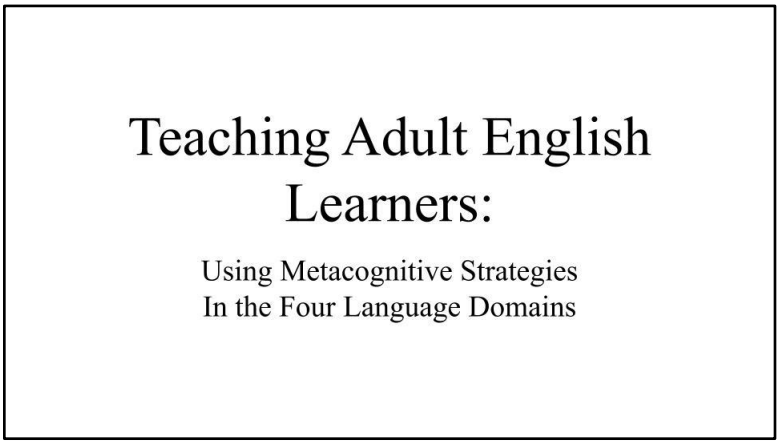
For example, workshop participants have the opportunity to analyze language domain tasks with MCSs in the context in which EL students will use them, and this analysis can inform teaching methods and approaches. The workshop activities also promote the use of prior knowledge in combination with thinking about MCSs, which facilitates comprehension of learning tasks (Vandergrift, 2003; Zhang & Goh, 2006). Participants will identify known strategies to use in the four domains and then narrow down which ones will work best for the task in combination with MCSs. This strategy selection is a part of self-regulation and facilitates learning (Boekaerts, 1999; Efklides, 2008; Hattie, 2012; Kuhl & Fuhrmann, 1998; Macaro, 2006; Pellegrino & Hilton, 2012; Plonsky, 2019; Zimmerman, 2010). Griffiths (2016) pointed out that since students can use many strategies with various activities, it is essential that instructors are familiar with these known strategies so that teachers can plan for future instruction. In the workshop, participants can practice listing and discussing various cognitive strategies, for example, and create their own lists of strategies they have used in the classroom and how MCSs fit with their chosen strategies. Participants can share in groups or write on white boards or on large paper tablets for discussions. At the end of the workshop, participants will also complete group projects to synthesize and exhibit their learning of how to explicitly teach MCSs in the four language domains and to allow an opportunity for participants to practice strategy implementation for their classrooms.

Chapter Four: Instructor Workshop

This chapter contains the materials to be used for a workshop or conference course for instructors of ESL/EFL students on how to incorporate metacognitive strategies (MCSs) into the four language domains with English learners (ELs). The materials include PowerPoint slides with a Quick Reference Guide with MCS references as well as tools that can be used for lesson planning, student learning, and instructor development (see Appendix A). The activities in this workshop are designed to be interrelated, so participants can generalize concepts from one activity in another and can create materials to use in a final group project at the end of the workshop.

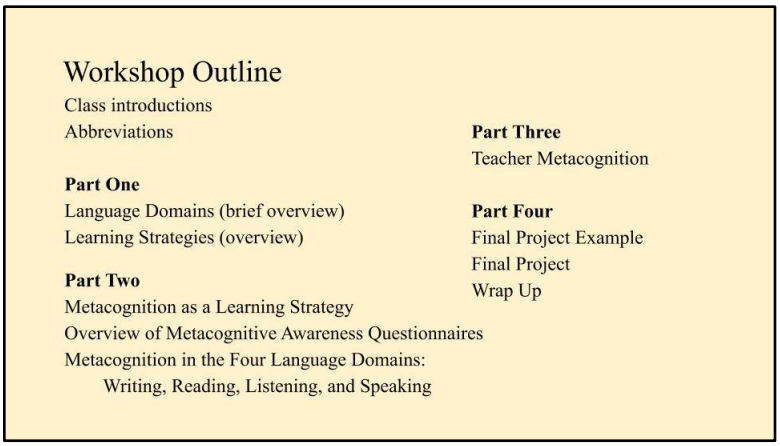
Additionally, there are several small group activities outlined in the learning tasks as research (Huang & Newbern, 2012; Liu & Goh, 2006; Nakatani, 2005; Teng, 2019a; Teng & Reynolds, 2019; Vandergrift & Goh, 2003) has shown significant effects of using MCSs to facilitate L2 comprehension and achievement outcomes, especially if students work in groups to discuss learning strategies. Participants will work in groups during the workshop to promote learning and awareness of how to implement research-based strategies and activities with MCSs in their classrooms. Participant discussions about various learning strategies with MCSs in groups promote peer and collaborative learning, which are essential parts of MCS instruction in classrooms (Huang & Newbern, 2012; Liu & Goh, 2006; Nakatani, 2005; Schraw, 2002; Teng, 2019a; Teng & Reynolds, 2019; Vandergrift & Goh, 2003). Furthermore, the idea of combining MCSs with other learning strategies is prominent in this workshop since Griffiths (2016, 2018) reported that this combination has a significant effect on learning.

Figure 4.1 Teaching Adult English Learners



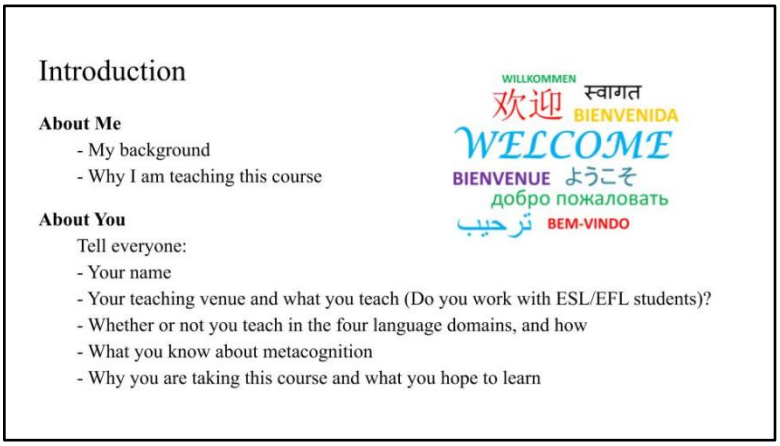
The course begins with an overview of topics as shown in the outline (Figure 4.2) that includes student and instructor awareness of MCSs and the use of learning strategies with ELs in the four language domains.

Figure 4.2 Workshop Outline



Next, the class discussion focuses on class introductions, learning goals, and the importance of ESL/EFL instructors' awareness of research-oriented strategies to enhance student learning (Figure 4.3). The discussion also helps to inform the course instructor of participants' backgrounds and learning goals.

Figure 4.3 Class Introductions and Icebreakers



The quote by Zimmerman (2010) in Figure 4.4 can facilitate reflection about personal experiences in teaching and can allow the course instructor to gain further awareness of participants' background and teaching philosophies. This knowledge can help shape the course instructor's responses to the class and can inform activity facilitation.

Figure 4.4 Independent Student Learning

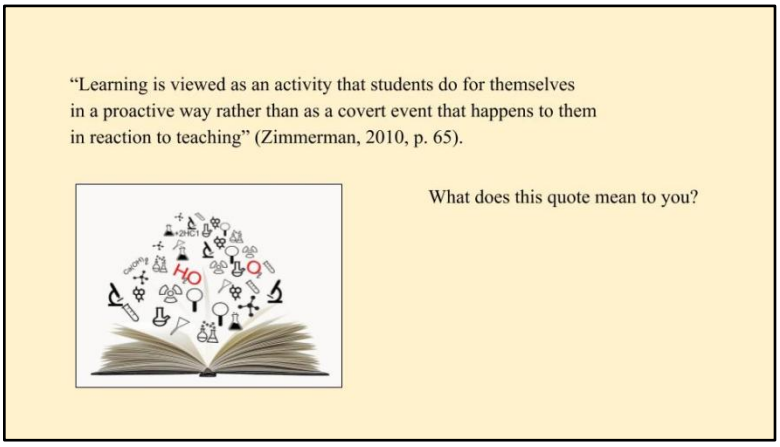
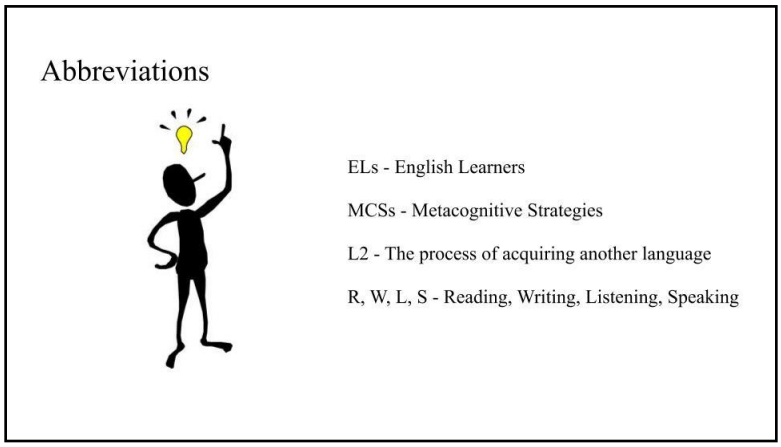

"Learning is viewed as an activity that students do for themselves
in a proactive way rather than as a covert event that happens to them
in reaction to teaching" (Zimmerman, 2010, p. 65).
What does this quote mean to you?

Figure 4.5 gives an overview of the acronyms in the presentation.

Figure 4.5 Definitions of Abbreviations


Abbreviations
ELs - English Learners
MCSs - Metacognitive Strategies
L2 - The process of acquiring another language
R, W, L, S - Reading, Writing, Listening, Speaking

Part One

The first section of the course (Figure 4.6) facilitates discussion about language domains and learning strategies. The topics activate prior knowledge, which promotes comprehension (Chamot, 2009; Hattie & Zierer, 2018; Parrish, 2019; Shabani, 2013; Zadina, 2014) and help lay a foundation for learning the application of MCSs in teaching L2.

Figure 4.6 Part One: Language Domains and Learning Strategies

Language domains.

It is important for ESL instructors (or instructors with EFL students) to promote the four language domains, and ways to implement strategies to learn these proficiency skills. In the next two topics (Figures 4.7 and 4.8), participants can review the four domains in ESL teaching, and can discuss their ideas about learning strategies that can help students gain L2 proficiency, especially when we explicitly teach them in our classrooms.

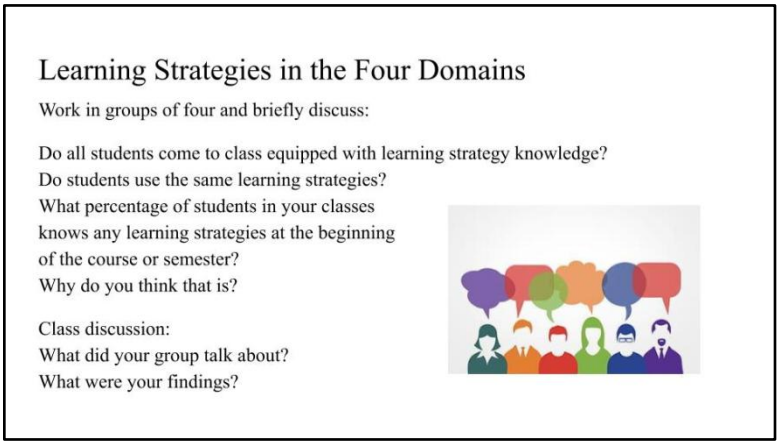
Figure 4.7 The Four Language Domains: Brief Overview

The Four Language Domains
When teaching English Learners (ELs), it is important to include:
Reading
Writing
Listening
Speaking (R, W, L, S)
These are essential skills for learning (Parrish, 2019; Nation, 2009).
Researchers argued that L2 proficiency can increase when ELs are explicitly instructed in learning strategies (Chamot & Kupper, 1989; Pintrich, 2002), especially in the four language domains (Huang & Newbern, 2012; Liu & Goh, 2006; Nakatani, 2005; Teng, 2019a; Teng & Reynolds, 2019; Vandergrift, 2003; Vandergrift & Goh, 2012

Learning strategies.

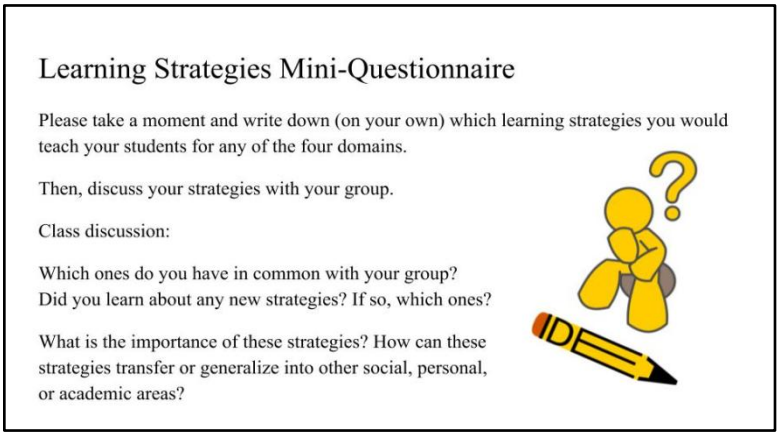
The participants briefly discuss whether students already know learning strategies in the four domains (Figure 4.8). L2 learners come to class with varying levels of education and skill sets in each of the four domains (Ghapanchi & Taheryan, 2012; Huang & Newbern, 2012; Liu & Goh, 2006, Nakatani, 2005; Teng, 2019a), and teachers should be aware of this variation of knowledge (Ghapanchi & Taheryan, 2012; Huang & Newbern, 2012; Liu & Goh, 2006, Nakatani, 2005; Teng, 2019a). Furthermore, teachers and learners should work together to identify which strategies best fit the learning task, based on the task requirements. Since not all strategies work for each student or for every task, strategy differentiation is necessary and beneficial (Griffiths, 2016, 2018; Gu, 2019; Short et al., 2018).

Figure 4.8 Learning Strategies in the Four Domains: Discussion Questions


Learning Strategies in the Four Domains
Work in groups of four and briefly discuss:
Do all students come to class equipped with learning strategy knowledge?
Do students use the same learning strategies?
What percentage of students in your classes knows any learning strategies at the beginning of the course or semester?
Why do you think that is?
Class discussion:
What did your group talk about?
What were your findings?

Next, group discussions will be based on participants' prior knowledge of strategies (Figure 4.9). Additionally, the mini-questionnaire layout allows participants the opportunity to practice with a format that will be used later in discussions about gathering information about ELs' metacognitive and strategy knowledge. Strategy usage can facilitate learning, recall, and automaticity with MCSs that can be transferred or generalized to other tasks (Macaro, 2006).

Figure 4.9 Learning Strategies Mini-Questionnaire

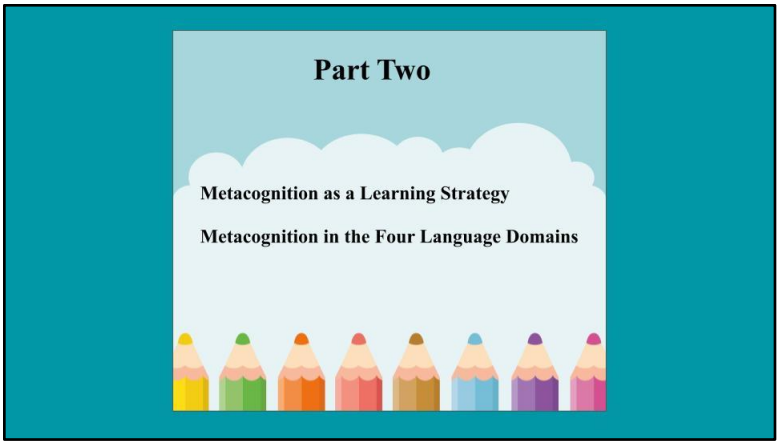

Learning Strategies Mini-Questionnaire
Please take a moment and write down (on your own) which learning strategies you would teach your students for any of the four domains.
Then, discuss your strategies with your group.
Class discussion:
Which ones do you have in common with your group?
Did you learn about any new strategies? If so, which ones?
What is the importance of these strategies? How can these strategies transfer or generalize into other social, personal, or academic areas?

Part Two

Part Two (Figure 4.10) focuses on the idea that there are diverse learning strategies that instructors and students can use; however, this workshop centers on metacognitive strategies (MCSs) with R, W, L, S in adult English Learner (EL) classes. The participants will not be given a definition of metacognition or of MCSs until after collaborative discussions that elicit prior knowledge and learning about metacognition. These group discussions are part of the learning process with MCSs that promotes student independence and self-regulated learning (Huang & Newbern, 2012; Liu & Goh, 2006; Nakatani, 2005; Prytula, 2012; Teng, 2019a; Teng & Reynolds, 2019; Vandergrift & Goh, 2003).

The instructor will also point out that MCSs are research-based strategies that promote independent student learning (Wilson & Conyers, 2016); however, students or instructors may not be aware of these strategies (Veenman et al, 2006) that are beneficial in promoting L2 skills (Vandergrift, 2003; Liu & Goh, 2006). Researchers (Lee & Mak, 2018; Nakatani, 2005; Schraw, 2002; Vann & Abraham, 1990; Wang & Han, 2017) indicated that students who are aware of learning strategies may not know how to use MCSs to promote classroom achievement or independent learning, thus, a workshop that informs about metacognition in classrooms is beneficial to ELs and ESL instructors.

Figure 4.10 Metacognition as a Learning Strategy in the Four Language Domains

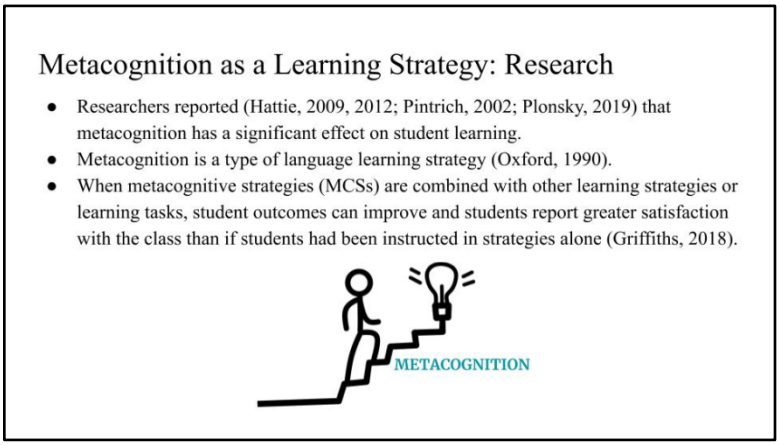


Metacognition as a learning strategy.

It is important to promote MCS use with other learning strategies so that students can comprehend not only how to learn but what to learn (Figure 4.11). Studies suggest that student outcomes can improve more with MCSs than with just other strategies alone (Griffiths, 2018; Huang & Newbern, 2012; Liu & Goh, 2006; Nakatani, 2005; Teng, 2019a; Teng & Reynolds, 2019; Vandergrift & Goh, 2003). Hattie's (2009) research compiled over 50,000 studies to

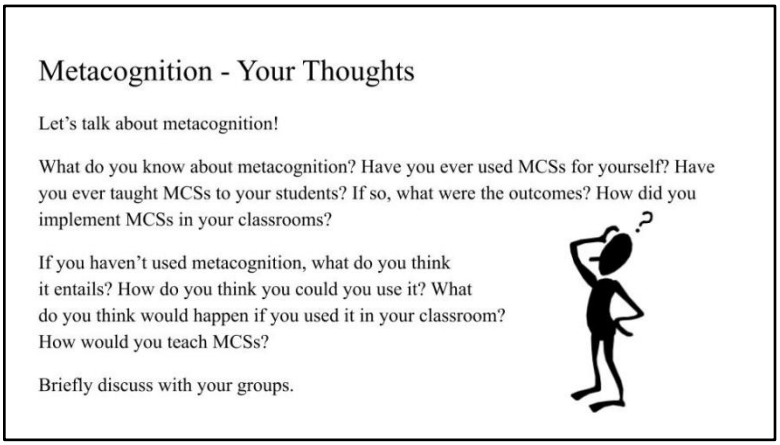
determine statistically effective learning interventions, and metacognition ranked in the top thirteen interventions to promote student achievement. Other effective methods included positive teacher-student relationships, feedback, reciprocal teaching, and advancing students based on their learning levels (acceleration) (Hattie, 2009).

Figure 4.11 Metacognition as a Learning Strategy: Research


Metacognition as a Learning Strategy: Research
Researchers reported (Hattie, 2009, 2012; Pintrich, 2002; Plonsky, 2019) that metacognition has a significant effect on student learning.
Metacognition is a type of language learning strategy (Oxford, 1990).
When metacognitive strategies (MCSs) are combined with other learning strategies or learning tasks, student outcomes can improve and students report greater satisfaction with the class than if students had been instructed in strategies alone (Griffiths, 2018).
METACOGNITION

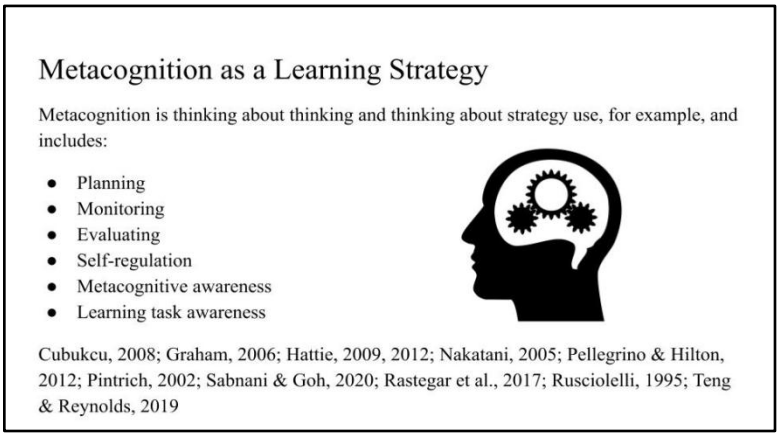
Prior knowledge and prediction have been shown as useful strategies to aid in learning new topics or concepts, especially when used in combination with MCSs (Huang & Newbern, 2012; Vandergrift, 2003). Additionally, engaging prior knowledge in collaborative activities promotes rich elaboration, learning, and reflection (Huang & Newbern, 2012; Liu & Goh, 2006; Nakatani, 2005; Teng, 2019a; Teng & Reynolds, 2019; Vandergrift & Goh, 2003). After the discussion, the instructor of the conference can point out participants' use of prediction and prior knowledge and their connection with MCSs (Figure 4.12).

Figure 4.12 Metacognition: Your Thoughts


Metacognition - Your Thoughts
Let's talk about metacognition!
What do you know about metacognition? Have you ever used MCSs for yourself? Have you ever taught MCSs to your students? If so, what were the outcomes? How did you implement MCSs in your classrooms?
If you haven't used metacognition, what do you think it entails? How do you think you could you use it? What do you think would happen if you used it in your classroom? How would you teach MCSs?
Briefly discuss with your groups.

Next, participants discuss metacognition as a learning strategy (Figure 4.13). MCSs include planning, monitoring, and evaluating as a part of self-regulation, metacognitive awareness, and learning task awareness. Students can use MCSs to self-regulate their strategy choice and use. Once a strategy is chosen, for example, a cognitive strategy such as repetition or summarizing, a student can then use MCSs to gauge the effectiveness of the strategy use. A student can also plan learning tasks and evaluate their learning outcomes (Cubukcu, 2008; Graham, 2006; Hattie, 2009, 2012; Nakatani, 2005; Pellegrino & Hilton, 2012; Pintrich, 2002; Sabnani & Goh, 2020; Rastegar et al., 2017; Rusciolelli, 1995; Teng & Reynolds, 2019). MCSs also include directed and selective attention in which students focus on a learning activity or a part of a task, respectively, while ignoring distractions (O'Malley & Chamot, 2009). For example, if a student is aware that their mind is wandering during class can refocus their attention on the professor or reread a passage of text that they did not understand (Zadina, 2014).

Figure 4.13 Metacognition as a Learning Strategy: Definition


Metacognition as a Learning Strategy
Metacognition is thinking about thinking and thinking about strategy use, for example, and includes:
Planning
Monitoring
Evaluating
Self-regulation
Metacognitive awareness
Learning task awareness
Cubukcu, 2008; Graham, 2006; Hattie, 2009, 2012; Nakatani, 2005; Pellegrino & Hilton, 2012; Pintrich, 2002; Sabnani & Goh, 2020; Rastegar et al., 2017; Rusciolelli, 1995; Teng & Reynolds, 2019

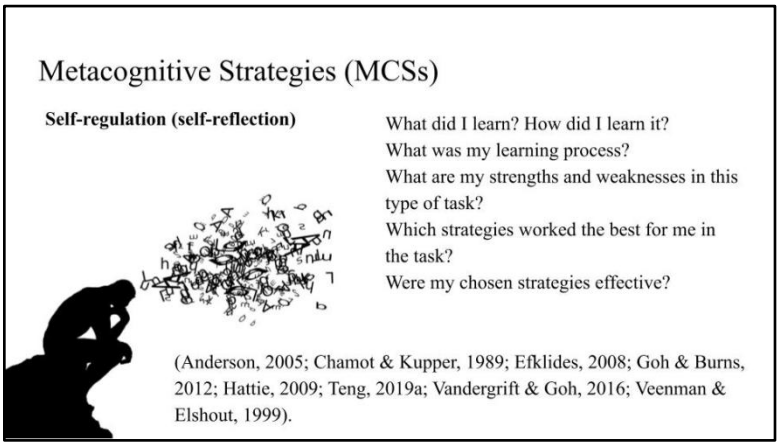
The metacognitive process of self-regulation (Figure 4.14) is fluid and involves the application of MCSs to learning activities (Anderson, 2002). By using MCSs in conjunction with other learning strategies, ELs can figure out how to approach learning tasks and maximize learning outcomes (Griffiths, 2018). MCS use may be one of the most important skills that L2 students can acquire (Anderson, 2002) and should be a part of classroom learning and activities (Chamot, 2009; Lee & Mak, 2018; Pintrich, 2002; Wilson & Conyers, 2016).

Figure 4.14 Metacognition as a Learning Strategy: Self-Regulation

Metacognition as a Learning Strategy
Metacognition promotes self-regulation, during which students can:
Plan and set goals
Choose, use, and modify strategies
Monitor strategy use
Monitor progress and task performance
Orchestrate various strategies
Assess/gauge learning
Assess the effectiveness of the chosen strategies
Anderson, 2002; Boekaerts, 1999; Efklides, 2008; Hattie, 2012; Kuhl & Fuhrmann, 1998; Pellegrino & Hilton, 2012

Zheng and Zheng (2019) posited that self-reflection is self-regulation and is inter-connected with metacognitive thinking in which students can learn to self-question their strategy use and learning process. After a review of MCS self-reflection questions in Figures 4.15 through 4.18, participants discuss the benefits of using MCSs in their classrooms. Participants can also find a list of self-regulation questions in the Quick Reference Guide (see Appendix A, Figure A3).

Figure 4.15 Metacognition as a Learning Strategy: Self-reflection


Metacognitive Strategies (MCSs)
Self-regulation (self-reflection)
What did I learn? How did I learn it?
What was my learning process?
What are my strengths and weaknesses in this type of task?
Which strategies worked the best for me in the task?
Were my chosen strategies effective?
(Anderson, 2005; Chamot & Kupper, 1989; Efklides, 2008; Goh & Burns, 2012; Hattie, 2009; Teng, 2019a; Vandergrift & Goh, 2016; Veenman & Elshout, 1999).

The following three slides (Figures 4.16, 4.17, and 4.18) give more examples of specific self-reflection questions that students can use to think about their thinking during learning tasks (Schraw, 2002). These MCSs facilitate independent learning through thought and task organization, planning, and management so that students can evaluate and monitor their learning, comprehension, and task performance (Chamot, 2009). During this discussion, participants will be directed to the Quick Reference Guide (See Appendix A, Figure A2) which has these general MCSs organized for convenience and as a reference tool.

Figure 4.16 Metacognitive Strategies: Planning

Metacognitive Strategies (MCSs)

Planning

Do I know what the activity/task is about?

What is the goal of the task?

How much time will I need to do the activity?

Which strategies will work?

Do I need other resources or information?

Adapted from Schraw, G. (2002).

Figure 4.17 Metacognitive Strategies: Monitoring

Metacognitive Strategies (MCSs)

Monitoring

Do I understand the task as I am doing it?

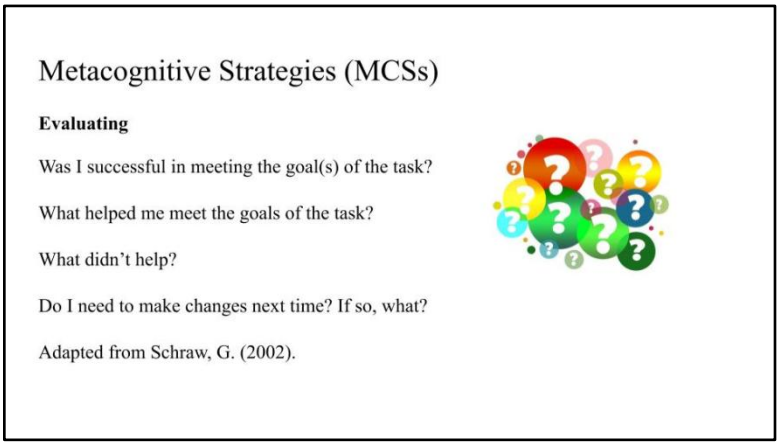
Does my output make sense?
Does the activity make sense?

Am I making good progress towards the task goal(s)?

What do I need to change to make the process work better?
Do I need new strategies? Do I need to change my approach?

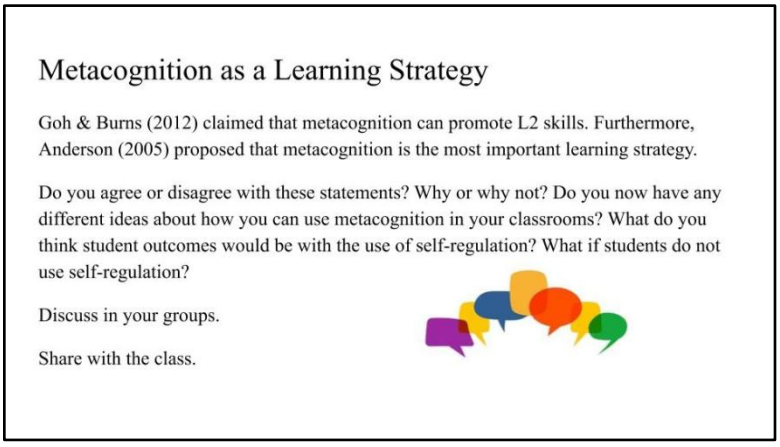
Adapted from Schraw, G. (2002).

Figure 4:18 Metacognitive Strategies: Evaluating


Metacognitive Strategies (MCSs)
Evaluating
Was I successful in meeting the goal(s) of the task?
What helped me meet the goals of the task?
What didn't help?
Do I need to make changes next time? If so, what?
Adapted from Schraw, G. (2002).

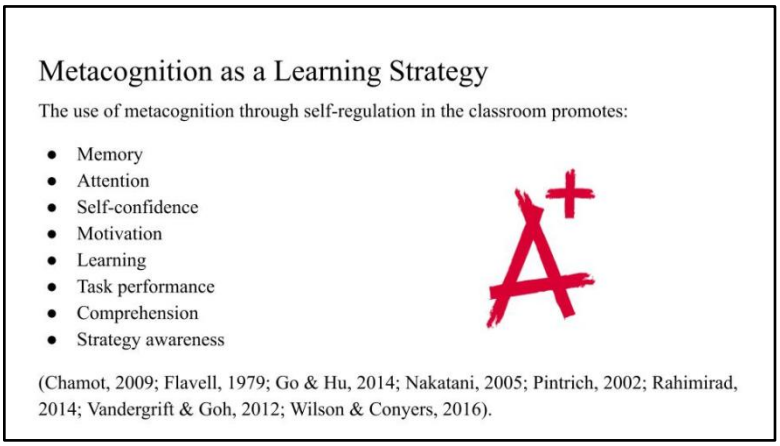
Next, participants reflect on how MCSs can be used in their classrooms and how these strategies can be beneficial to student learning (Figure 4.19). Participants are also asked to consider whether their ideas have changed about how to use MCSs in the classroom after the review of the self-regulatory process. This discussion explicitly promotes prediction, monitoring, evaluating, and collaborative learning using MCSs to facilitate comprehension (Hattie, 2009, 2012; Liu & Goh, 2006; Pintrich, 2002; Plonsky, 2019; Vandergrift, 2003; Wang, et al., 1990).

Figure 4.19 Metacognition as a Learning Strategy: Discussion


Metacognition as a Learning Strategy
Goh & Burns (2012) claimed that metacognition can promote L2 skills. Furthermore, Anderson (2005) proposed that metacognition is the most important learning strategy.
Do you agree or disagree with these statements? Why or why not? Do you now have any different ideas about how you can use metacognition in your classrooms? What do you think student outcomes would be with the use of self-regulation? What if students do not use self-regulation?
Discuss in your groups.
Share with the class.

There are many benefits of self-reflection as a part of self-regulation (Figure 4.20). Researchers (El-Sakka, 2016; Pellegrino & Hilton, 2012) reported that the process of self-regulating through MCSs can positively affect study habits, motivation, and learning behaviors and independence. Students with higher learning achievements reflect on their learning processes, their strengths and weaknesses, what and how they have learned, and their strategy use and effectiveness (Anderson, 2005; Chamot & Kupper, 1989; Efklides, 2008; Goh & Burns, 2012; Hattie, 2009; Teng, 2019a; Vandergrift & Goh, 2016; Veenman & Elshout, 1999). In contrast, students who do not self-regulate may be at lower achievement levels and may passively approach learning tasks as these students typically depend on teacher input to complete classroom activities (Teng, 2019a).

Figure 4.20 Metacognition as a Learning Strategy: Benefits of Self-Regulation

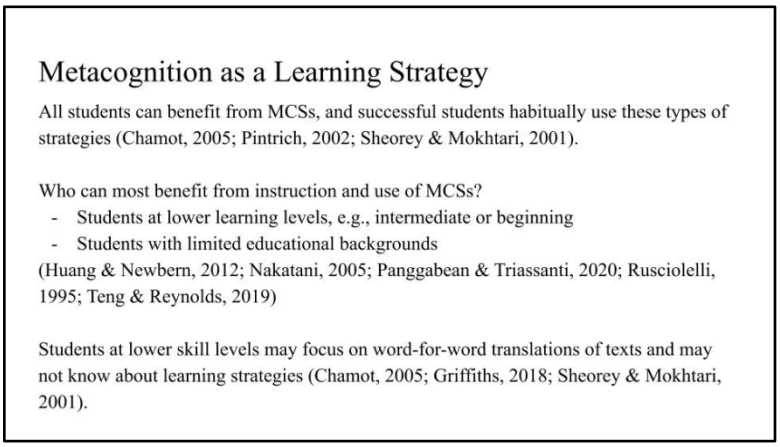

Metacognition as a Learning Strategy
The use of metacognition through self-regulation in the classroom promotes:
Memory
Attention
Self-confidence
Motivation
Learning
Task performance
Comprehension
Strategy awareness
(Chamot, 2009; Flavell, 1979; Go & Hu, 2014; Nakatani, 2005; Pintrich, 2002; Rahimirad, 2014; Vandergrift & Goh, 2012; Wilson & Conyers, 2016).

It is important to point out the differences in ELs' use and awareness of MCSs, based on research (Figure 4.21). ELs in all types of settings and at different stages of learning can benefit from MCSs, especially beginners or those with limited prior educational experiences. These students may have lower proficiency or skill levels and may focus on less effective learning

strategies such as word-for-word translations of oral or written texts. Moreover, beginning students or those with low education levels may not know learning strategies or how to use them. This lack of strategy awareness can limit student achievement (Huang & Newbern, 2012; Lee & Mak, 2018; Nakatani, 2005; Schraw, 2002; Teng, 2019a; Teng & Reynolds, 2019; Vandergrift, 2003; Wang & Han, 2017; Wilson & Conyers, 2016).

On the other hand, successful students and those with more advanced L2 skills use various learning strategies, but consistently use MCSs (Bozorgian, 2012; Chamot, 2009; Griffiths, 2016, 2018; Hattie 2009; Huang & Newbern, 2012; Pintrich, 2002; Sheorey & Mokhtari, 2001; Vandergrift, 2003; Veenman & Elshout, 1999; Wilson & Conyers, 2016) and know which strategies are effective for their learning goals (Chamot, 2005; Griffiths, 2018; Sheorey & Mokhtari, 2001). Successful students also have knowledge of their difficulties during language domain tasks (Goh, 2000; Vandergrift et al., 2006). However, students do not use the same strategies all the time and one strategy is not universal for all students (Griffiths, 2016, 2018).

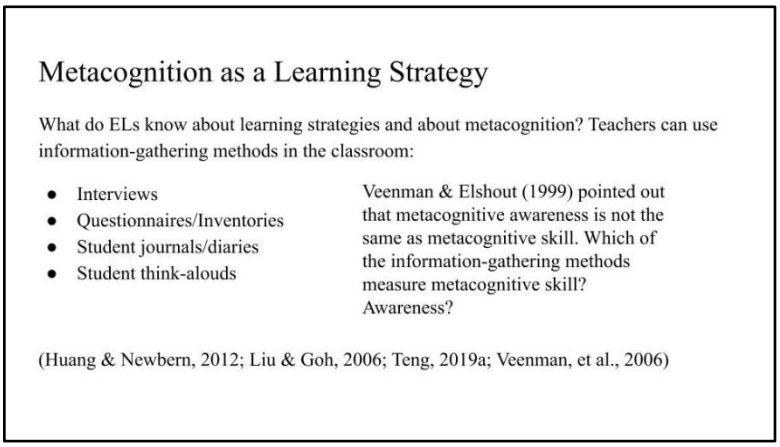
Figure 4.21 Metacognition as a Learning Strategy: Student Benefits


Metacognition as a Learning Strategy
All students can benefit from MCSs, and successful students habitually use these types of strategies (Chamot, 2005; Pintrich, 2002; Sheorey & Mokhtari, 2001).
Who can most benefit from instruction and use of MCSs?
- Students at lower learning levels, e.g., intermediate or beginning
- Students with limited educational backgrounds
(Huang & Newbern, 2012; Nakatani, 2005; Panggabean & Triassanti, 2020; Rusciolelli, 1995; Teng & Reynolds, 2019)
Students at lower skill levels may focus on word-for-word translations of texts and may not know about learning strategies (Chamot, 2005; Griffiths, 2018; Sheorey & Mokhtari, 2001).

The discussion continues about student MCS awareness and focuses on how instructors can gather information about which strategies students know (Figure 4.22). For example, teachers can use student inventories, interviews, and questionnaires to learn EL background knowledge; homework allows teachers to know how best to monitor, adapt, and assess course tasks to guide learning; student journaling and think-alouds allow teachers to have awareness of students' thinking processes, reactions, learning, etc. in response to learning activities or the course itself (Hartman, 2001; Huang & Newbern, 2012; Liu & Goh, 2006; Teng, 2019a; Veenmant & Elshout, 1999).

During this discussion, participants will be reminded that they participated in similar informal questionnaires at the beginning of the course in order to promote awareness of their strategy knowledge and use. An informal inventory for general learning strategy use is in the Quick Reference Guide (see Appendix A, Figure A12) and can be adapted to fit any of the language domains. Also, more information about journaling and think-alouds is included in the upcoming discussions about strategy use in the four domains.

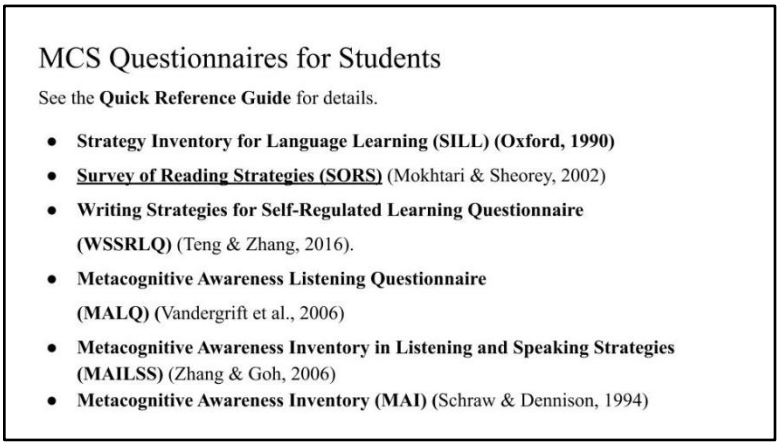
Figure 4.22 Metacognition as a Learning Strategy: MCS Awareness Tools


Metacognition as a Learning Strategy
What do ELs know about learning strategies and about metacognition? Teachers can use information-gathering methods in the classroom:
Interviews
Questionnaires/Inventories
Student journals/diaries
Student think-alouds
Veenman & Elshout (1999) pointed out that metacognitive awareness is not the same as metacognitive skill. Which of the information-gathering methods measure metacognitive skill? Awareness?
(Huang & Newbern, 2012; Liu & Goh, 2006; Teng, 2019a; Veenman, et al., 2006)

Questionnaires for students that focus on MCS knowledge and use (Figure 4.23) are listed in the Quick Reference Guide (see Appendix A, Figure A13). It is important to use questionnaires that are geared towards ELs within ESL classrooms to accurately inform both teachers and students about metacognitive awareness and strategy use in language domain tasks (Huang & Newbern, 2012; Liu & Goh, 2006; Mokhtari & Sheorey, 2002; Teng, 2019a). These questionnaires can also be a means to help students think metacognitively (Mokhtari & Sheorey, 2002; Oxford, 1990). However, researchers (Petrić & Czárl, 2003; Rubin et al., 2007) pointed out that without context or course content, students tend to have difficulties indicating which strategies they use to complete tasks. Therefore, these types of questionnaires may be better indicators of metacognitive awareness if they are coupled with learning activities in the four language domains. A link is provided in the slide for the Survey of Reading Strategies (SORS) so that participants can view an example of the layout and items on the questionnaire.

The Quick Reference Guide also includes Metacognitive inventories for instructors (see Appendix A, Figure A13) to foster teacher self-reflection and metacognitive teaching to promote teacher and student learning development (Balcikanli, 2011; Hartman, 2001; Kallio et al., 2017). Near the end of the workshop, participants complete a standardized questionnaire tailored for teachers.

Figure 4.23 MCS Questionnaires for Students

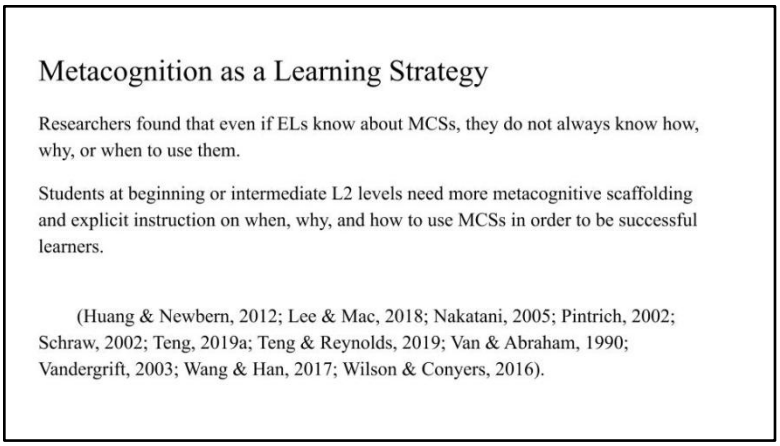

MCS Questionnaires for Students
See the **Quick Reference Guide** for details.
- **Strategy Inventory for Language Learning (SILL) (Oxford, 1990)**
- **Survey of Reading Strategies (SORS)** (Mokhtari & Sheorey, 2002)
- **Writing Strategies for Self-Regulated Learning Questionnaire (WSSRLQ)** (Teng & Zhang, 2016).
- **Metacognitive Awareness Listening Questionnaire (MALQ)** (Vandergrift et al., 2006)
- **Metacognitive Awareness Inventory in Listening and Speaking Strategies (MAILSS)** (Zhang & Goh, 2006)
- **Metacognitive Awareness Inventory (MAI)** (Schraw & Dennison, 1994)

The need for explicit instruction of MCS is the focus of the next discussion (Figure 4.24). Researchers (Teng, 2019a; Veenman & Elshout,1999) posited that interviews or questionnaires are helpful to learn about ELs' awareness of MCSs, but there is a difference between knowing about and using metacognitive strategies to increase learning. Veenman and Elshout (1999) went on to say that this awareness does not inevitably translate to the use of MCSs to further learning due to various reasons that may include a lack of interest in the material or low motivation. Furthermore, Teng (2019a) found that individual students reported knowing about strategies but had difficulties in knowing when and how to use them, as opposed to ELs in group work who had high use of MCSs in writing tasks, for example.

Researchers (Anderson, 2002, 2005; Hattie 2009, 2012; Wang, et al. 1990) encouraged instructors to promote L2 learning with MCSs during classroom instruction. Pintrich (2002) proposed that MCSs should be labeled as such to explicitly connect to other strategy use as well and to promote classroom discussion and awareness about thinking and learning. Teacher-student discussions about MCSs can promote explicit instruction, awareness, and learning of these strategies during classroom activities. For example, students can discuss or write which

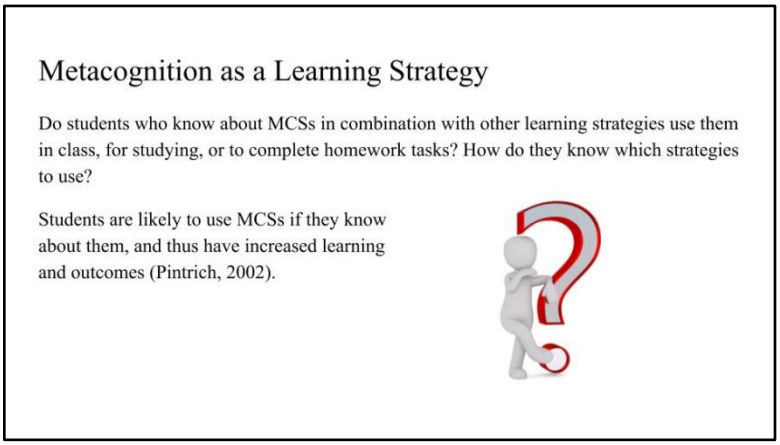
activities they are going to use for a task and then can discuss which strategies they used, which ones worked well, and what changes they would make next time for a similar task (Zadina, 2014).

Figure 4.24 Metacognition as a Learning Strategy: Need for Explicit Instruction


Metacognition as a Learning Strategy
Researchers found that even if ELs know about MCSs, they do not always know how, why, or when to use them.
Students at beginning or intermediate L2 levels need more metacognitive scaffolding and explicit instruction on when, why, and how to use MCSs in order to be successful learners.
(Huang & Newbern, 2012; Lee & Mac, 2018; Nakatani, 2005; Pintrich, 2002; Schraw, 2002; Teng, 2019a; Teng & Reynolds, 2019; Van & Abraham, 1990; Vandergrift, 2003; Wang & Han, 2017; Wilson & Conyers, 2016).

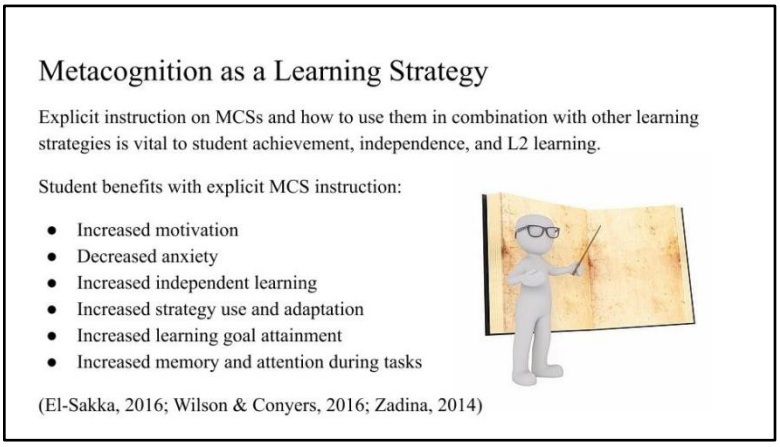
The next discussion points raise questions about student use of MCSs and how students know which strategies to use in learning activities (Figure 4.25). Griffiths (2018) suggests that many socio-affective factors, for example, personality, motivation, age, or learning style can have an effect on which strategies students choose, or whether or not students use learning strategies to help increase their learning efforts. However, Pintrich (2002) found that students who receive explicit instruction on MCSs during content instruction are more likely to use them when studying, in classroom activities, and to aid in memory and recall tasks, and it is this knowledge that heightens classroom learning and performance.

Figure 4.25 Metacognition as a Learning Strategy: MCS Awareness


Metacognition as a Learning Strategy
Do students who know about MCSs in combination with other learning strategies use them in class, for studying, or to complete homework tasks? How do they know which strategies to use?
Students are likely to use MCSs if they know about them, and thus have increased learning and outcomes (Pintrich, 2002).

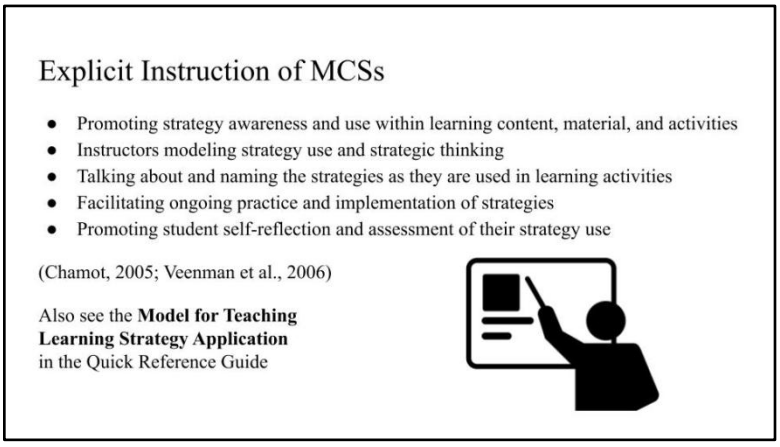
There are several benefits to students when teachers include MCSs with other learning strategies (Figure 4.26). For example, explicit instruction of MCSs can facilitate student motivation and can help them become independent learners who know how and when to choose cognitive strategies that can enhance their learning, i.e., students can be metacognitive, and they know how to adapt strategies based on their strengths and weaknesses (Wilson & Conyers, 2016; Zadina, 2014). The use of these strategies can facilitate confidence, the creation and achievement of learning goals, attention and memory, and the ability to monitor learning and to apply learned concepts in multiple situations inside or outside of the classroom (Wilson & Conyers, 2016), especially when applied within the four language domains (Goh & Burns, 2012; Liu & Goh, 2006). For example, instruction of how to use MCSs during spoken communication increased speaking proficiency and motivation, and decreased anxiety during conversational activities among college-level ELs (El-Sakka, 2016).

Figure 4.26 Metacognition as a Learning Strategy: Benefits of Explicit Instruction


Metacognition as a Learning Strategy
Explicit instruction on MCSs and how to use them in combination with other learning strategies is vital to student achievement, independence, and L2 learning.
Student benefits with explicit MCS instruction:
Increased motivation
Decreased anxiety
Increased independent learning
Increased strategy use and adaptation
Increased learning goal attainment
Increased memory and attention during tasks
(El-Sakka, 2016; Wilson & Conyers, 2016; Zadina, 2014)

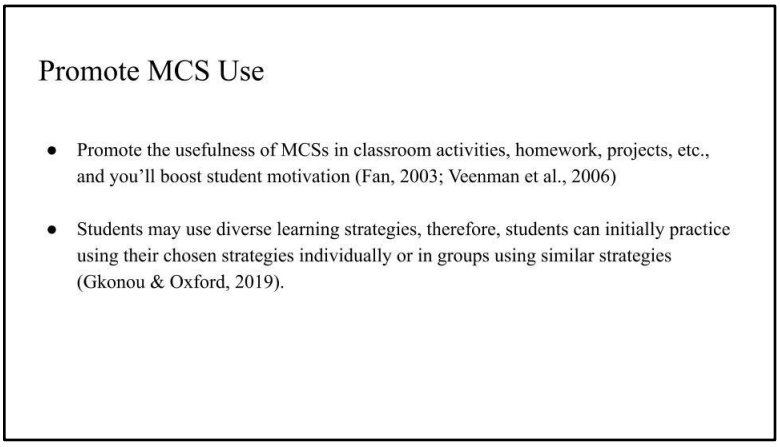
Next, the discussion focuses on the importance of the explicit teaching of MCSs (Figure 4.27). Effective instruction of MCSs consists of teaching metacognition within learning content to promote comprehension, facilitating student motivation by promoting the usefulness of MCSs in learning tasks, and providing continued opportunities to implement and practice MCSs to ensure learning and generalization of these strategies (Veenman et al., 2006). Students are more likely to use MCSs if teachers explicitly explain the benefits and usefulness of these types of learning strategies (Fan, 2003; Veenman et al., 2006). Instructors can point out the use of MCSs with other strategies as they happen in the classroom, for example, with reading strategies, and can label the strategies and discuss them (Chamot, 2005; Pintrich, 2002). Participants can also reference the Quick Reference Guide for an instructional model for learning strategies (see Appendix A, Figure A1).

Figure 4.27 Explicit Instruction of MCSs


Explicit Instruction of MCSs
Promoting strategy awareness and use within learning content, material, and activities
Instructors modeling strategy use and strategic thinking
Talking about and naming the strategies as they are used in learning activities
Facilitating ongoing practice and implementation of strategies
Promoting student self-reflection and assessment of their strategy use
(Chamot, 2005; Veenman et al., 2006)
Also see the Model for Teaching Learning Strategy Application in the Quick Reference Guide

Teachers who model strategy use (Figure 4.28) can promote student learning (Chamot, 2005; Hartman, 2001; Huang & Newbern, 2012; Pintrich, 2002; Schraw, 2002; Zhang & Zhang, 2019; Zimmerman, 2010). For example, in Teng's (2019a) study, teachers modeled a writing task and verbalized which problems they may encounter and demonstrated how to choose strategies for a specific task. By showing students how the strategies should be used in metacognitive experiences, teachers can maximize learning in opportunities for self-regulation as students rethink and revise their strategy use (Zhang & Zhang, 2019). Showing students how to use MCSs gives students the tools on how to use them in future tasks (Zhang & Zhang, 2019).

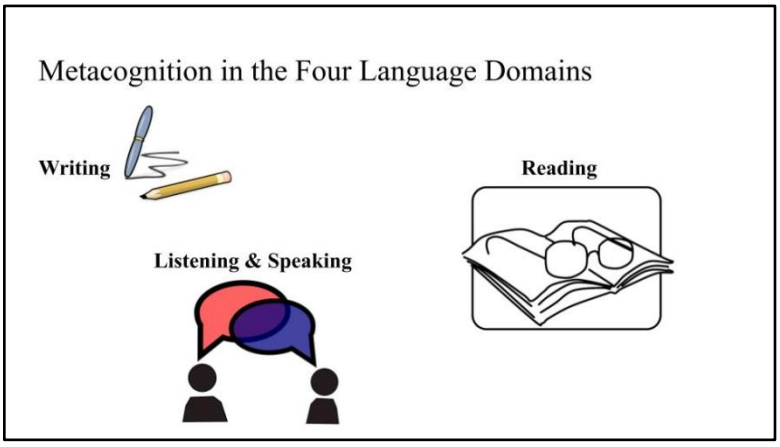
Figure 4.28 Promote MCS Use


Promote MCS Use
Promote the usefulness of MCSs in classroom activities, homework, projects, etc., and you'll boost student motivation (Fan, 2003; Veenman et al., 2006)
Students may use diverse learning strategies, therefore, students can initially practice using their chosen strategies individually or in groups using similar strategies (Gkonou & Oxford, 2019).

Metacognition in the four language domains.

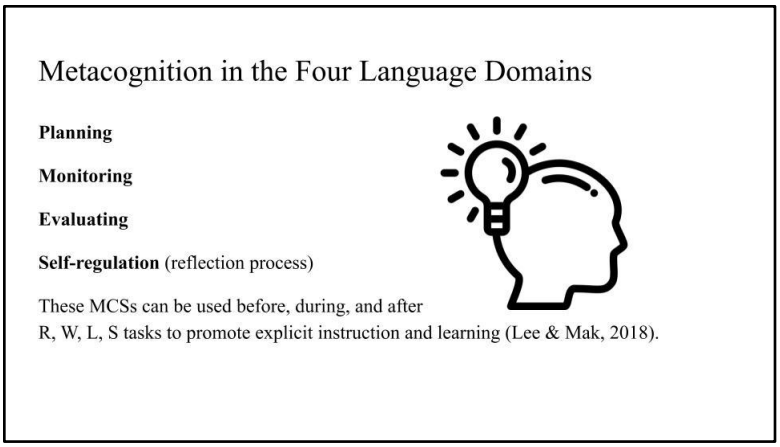
The next section highlights the use of MCSs in the four language domains and that explicit instruction of MCSs in the four domains is useful to promote L2 skills (Figure 4.29). The discussion begins with writing, followed by reading, and listening and speaking. Ghapanchi and Taheryan (2012) found a significant correlation between listening and speaking skills when combined with MCSs, thus, these two language domains will be discussed in tandem. Writing and reading skills are also correlated (Schoonen, 2019), but since writing is very closely linked with metacognition (Teng, 2019b), these two domain skills will be discussed separately.

Figure 4.29 Metacognition in the Four Language Domains (R, W, L, S)



MCSs in the four domains can be used with explicit instruction prior to, during, and after learning tasks (Lee & Mak, 2018) (Figure 4.30).

Figure 4.30 Metacognition in the Four Language Domains

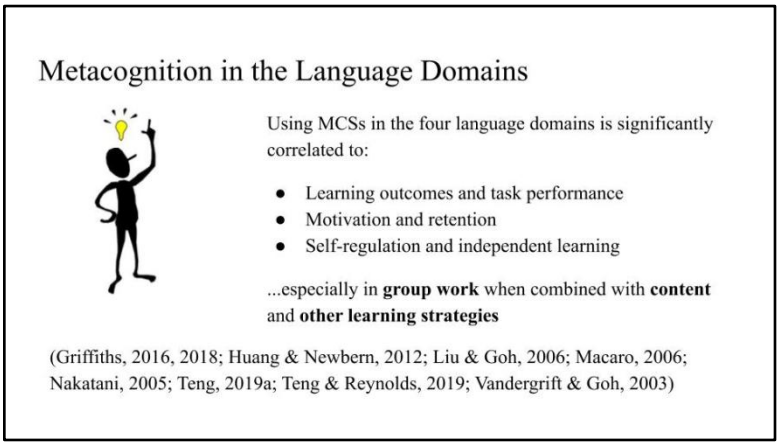

Metacognition in the Four Language Domains
Planning
Monitoring
Evaluating
Self-regulation (reflection process)
These MCSs can be used before, during, and after
R, W, L, S tasks to promote explicit instruction and learning (Lee & Mak, 2018).

Additionally, it is important to inform participants about relevant research in the area of the four language domains and MCSs (Figure 4.31). With explicit instruction and collaboration with MCSs in classroom learning activities, students tend to have higher achievement scores and outcomes (Huang & Newbern, 2012; Liu & Goh, 2006; Nakatani, 2005; Teng, 2019a; Teng &

Reynolds, 2019; Vandergrift & Goh, 2003). Additionally, when students and teachers think about learning and have group conversations in the classroom, these dialogues can inform teaching and lesson planning (Hattie & Zierer, 2018).

Researchers found that group work with MCSs within the four language domains had a significant effect on learning outcomes, motivation, retention, self-regulation, and task performance, especially when combined with learning content (Huang & Newbern, 2012; Liu & Goh, 2006; Nakatani, 2005; Teng, 2019a; Teng & Reynolds, 2019; Vandergrift & Goh, 2003) especially in group work (Huang & Newbern, 2012; Teng & Reynolds, 2019), and when paired with other learning strategies (Griffiths, 2016, 2018). To promote MCS awareness and student motivation, it is beneficial to explain to students the benefits of working in groups (Chamot, 2009).

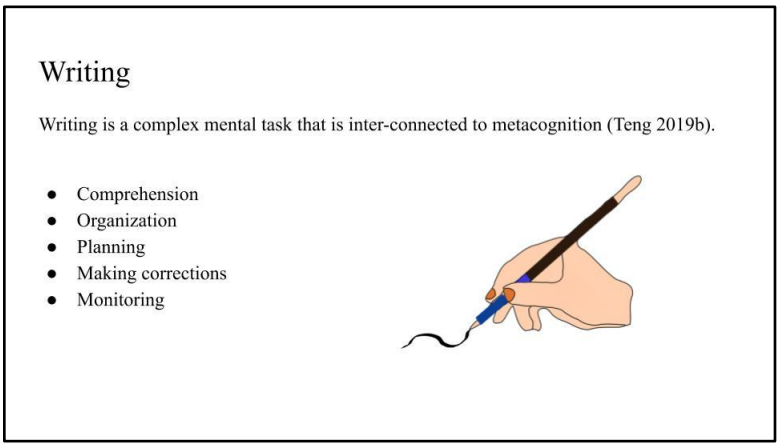
Figure 4.31 Metacognition in the Language Domains: Research


Metacognition in the Language Domains
Using MCSs in the four language domains is significantly correlated to:
Learning outcomes and task performance
Motivation and retention
Self-regulation and independent learning
...especially in group work when combined with content and other learning strategies
(Griffiths, 2016, 2018; Huang & Newbern, 2012; Liu & Goh, 2006; Macaro, 2006; Nakatani, 2005; Teng, 2019a; Teng & Reynolds, 2019; Vandergrift & Goh, 2003)

Writing.

Writing is a complex task and is interconnected to metacognition (Figure 4.32). Since writing begins with a gathering of resources and information, which are then constructed and developed into a structured format, MCSs such as planning, monitoring, and evaluating are especially important for the achievement of writing goals (Griffiths, 2016; Teng, 2019a). Teng (2019b) found significant correlations between the use of MCSs and writing task outcomes, especially when students knew their strengths and weaknesses and knew how to choose writing strategies that work for them. ELs who consistently use MCSs and self-regulation tap into their critical thinking skills, especially during collaborative tasks and discussions.

Figure 4.32 Metacognition in the Language Domains: Writing is Complex



In the following activity, participants work individually and in groups to gather writing strategies and to encourage student activities that combine MCSs with other learning strategies (Figure 4.33). Additionally, the strategies discussed can be used in a final group project at the end of the workshop.

Figure 4.33 Writing Strategies Activity

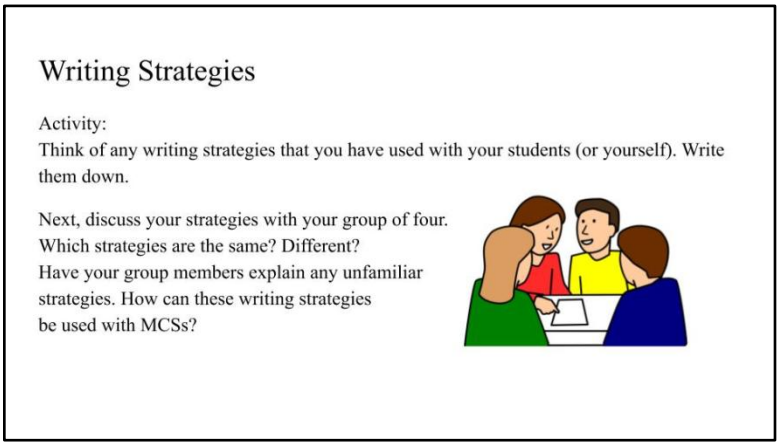
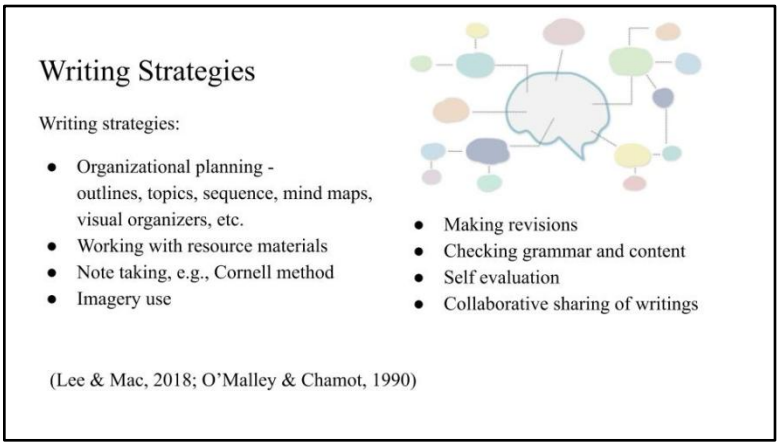

Writing Strategies
Activity:
Think of any writing strategies that you have used with your students (or yourself). Write them down.
Next, discuss your strategies with your group of four.
Which strategies are the same? Different?
Have your group members explain any unfamiliar strategies. How can these writing strategies be used with MCSs?

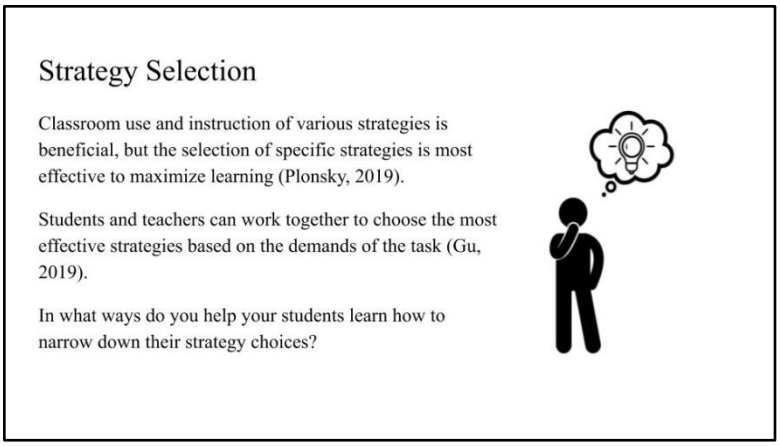
Figure 4.34 includes a non-exhaustive list of writing strategies that can be used with MCSs and can add to the previous conversation and group activity. O'Malley and Chamot (1990) argued that organizational planning is perhaps the most important writing strategy, which fits with MCSs. Not all the strategies in Figure 4.34 are strictly MCSs, but researchers pointed out that MCSs work best when combined with other strategies or content (Griffiths, 2018; Macaro, 2006).

Figure 4.34 Writing Strategies Examples


Writing Strategies
Writing strategies:
Organizational planning - outlines, topics, sequence, mind maps, visual organizers, etc.
Working with resource materials
Note taking, e.g., Cornell method
Imagery use
Making revisions
Checking grammar and content
Self evaluation
Collaborative sharing of writings
(Lee & Mac, 2018; O'Malley & Chamot, 1990)

Instructors should be aware of how to help students select strategies that fit the learning task to promote independent student learning (Gu, 2019; Plonsky, 2019). Participants can discuss ways in which they can promote appropriate and effective strategy selection (Figure 4.35).

Figure 4.35 Strategy Selection


Strategy Selection
Classroom use and instruction of various strategies is beneficial, but the selection of specific strategies is most effective to maximize learning (Plonsky, 2019).
Students and teachers can work together to choose the most effective strategies based on the demands of the task (Gu, 2019).
In what ways do you help your students learn how to narrow down their strategy choices?

Next, the workshop instructor will point out MCS questions for writing planning, monitoring, and evaluating (Figures 4.36, 4.37, and 4.38) that can be easily adapted to any of the four language domains. A list of specific MCS questions for writing is in the Quick Reference Guide (see Appendix A, Figure A4). Later, participants will be asked to create their own lists of questions for other domains, using these types of questions and those in the reference guide as examples.

Figure 4.36 MCSs for Writing: Planning

MCSs for Writing

Planning

What is the writing task about?
Who is it for? (audience)
What are my writing goals?
How much time will I need to complete the writing task?
Which strategies will I use?
Do I have the needed resources, materials, and information?

Adapted from Lee and Mak (2018).

Figure 4.37 MCSs for Writing: Monitoring

MCSs for Writing

Monitoring

Is the meaning and purpose of my writing clear? Does it make sense?
Am I addressing my target audience?
Is my language use and tone appropriate for the task?
Am I using effective writing strategies? Do I need to change strategies?
What difficulties do I have with this writing task? How can I resolve them?
Are my writing goals being met?
Do I need to modify my writing approach?

Adapted from Lee and Mak (2018).

Figure 4.38 MCSs for Writing: Evaluating

MCSs for Writing

Evaluating

Were my writing goals achieved?
Should I have new writing goals? Which ones?
What were my strengths and weaknesses for the writing task?
What should I do differently next time? What worked? What didn't work?

Adapted from Lee and Mak (2018).

Student writing prompts for individual self-reflection can promote self-regulation (Teng, 2019a) (Figure 4.39). Griffiths (2016) found that ELs reported that self-regulation strategies such as planning, monitoring and revising, keeping a notebook of writings and vocabulary, and consulting with the instructor had positive correlations with higher writing scores than did using strategies such as analyzing or memorizing texts, or relying on another person for proofreading, for example.

Figure 4.39 MCSs for Writing: Self-reflection

MCSs for Writing

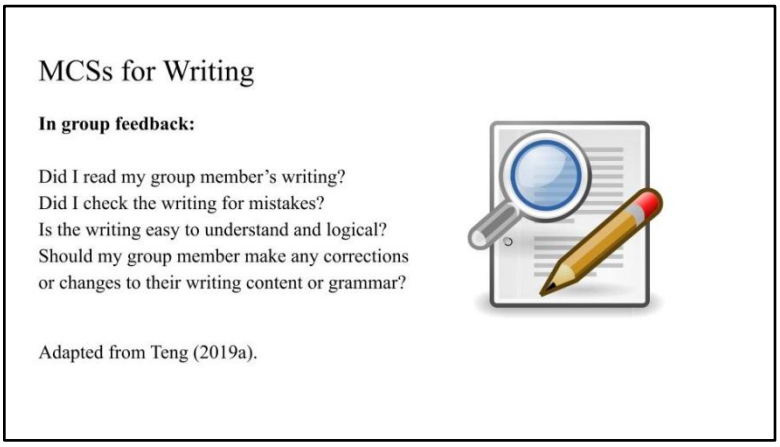
In self-reflection/self-evaluation:

Are my paragraphs spaced correctly?
Is my page formatted correctly?
Does my writing make sense? Is it logical? Is it clear?
Are my arguments sound, or should I choose another argument?
What is my argument?
Did I use my references and resources correctly?
What is my conclusion?

Adapted from Teng (2019a).

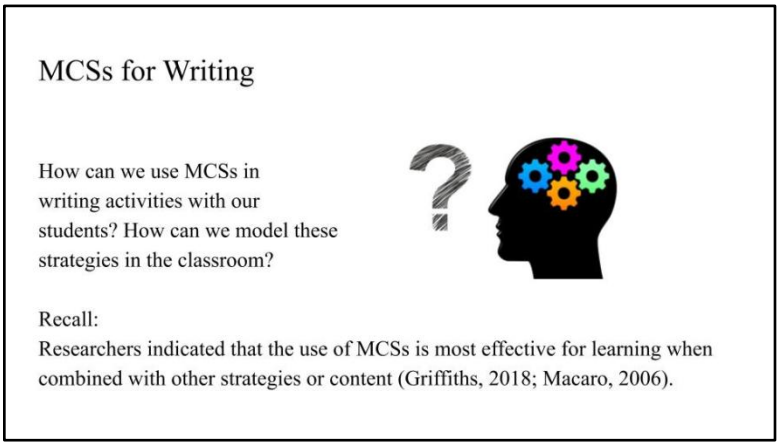
Furthermore, since group work has a significant effect on learning with MCSs (Huang & Newbern, 2012; Liu & Goh, 2006; Nakatani, 2005; Teng, 2019a; Teng & Reynolds, 2019; Vandergrift & Goh, 2003) it is beneficial for instructors to know MCSs for group feedback in writing tasks for explicit teaching in order to promote learning (Figure 4.40). Participants can view the list of self-reflection questions for writing tasks (individual and group-based) in the Quick Reference Guide (see Appendix A, Figure A5).

Figure 4.40 MCSs for Writing: Group Feedback


MCSs for Writing
In group feedback:
Did I read my group member's writing?
Did I check the writing for mistakes?
Is the writing easy to understand and logical?
Should my group member make any corrections or changes to their writing content or grammar?
Adapted from Teng (2019a).

The next few slides highlight MCSs for writing in beginner, intermediate, and advanced-level activities such as a grammar cloze worksheet and plagiarism awareness tasks (Figures 4.41-4.45). MCSs can be used in all levels of activities for ELs (Wilson & Conyers, 2016), and have been shown to promote L2 student achievement especially with less-skilled learners (Bozorgian, 2012; Hattie 2009; Huang & Newbern, 2012; Vandergrift, 2003; Veenman & Elshout, 1999). Workshop participants will be given the opportunity to discuss, work with, and model learning strategies and MCSs in these types of activities to promote research-based pedagogy.

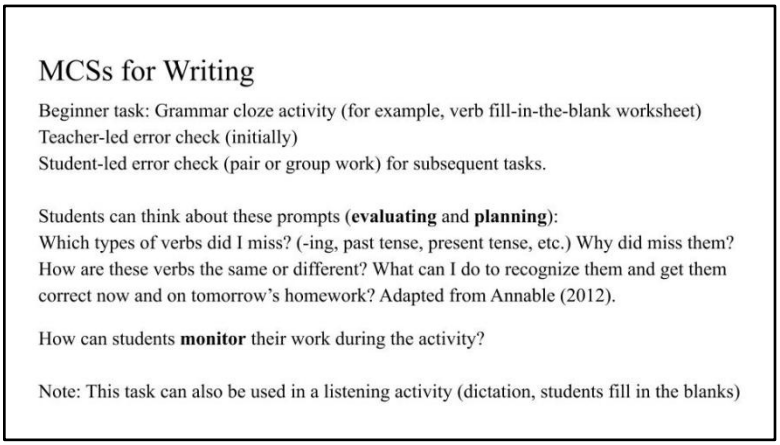
Figure 4.41 MCSs for Writing in Classroom Content


MCSs for Writing
How can we use MCSs in writing activities with our students? How can we model these strategies in the classroom?
Recall:
Researchers indicated that the use of MCSs is most effective for learning when combined with other strategies or content (Griffiths, 2018; Macaro, 2006).

Cloze activities can provide scaffolding for grammar tasks but can be used with MCSs to focus on the process of learning L2 grammar and to introduce the idea of thinking about thinking during writing tasks (Figure 4.42). The discussion can promote examples of the activity with beginners and advancing ELs. For example, after beginners complete the activity, the instructor can check their answers in a class discussion format. For subsequent tasks, the students can check their own answers or in pairs/groups, and can use the MCS prompts individually, then in pairs/groups to maximize learning. Intermediate learners can self-check in pairs or groups and can discuss the MCS prompts. Advanced students can write detailed reflections about the prompts in journals and discuss their writing, reflections, and use of MCSs in groups.

Furthermore, beginning students can combine sentences in a cloze activity to form paragraphs. Students can then use MCSs to plan, monitor, evaluate their paragraph construction, e.g., “Did I indent? How many sentences are in my paragraph? Do I need to add more sentences? Does my paragraph make sense? Am I on topic? Are there any grammar, spacing, or spelling errors in my paragraph? How can I plan to correct errors?”

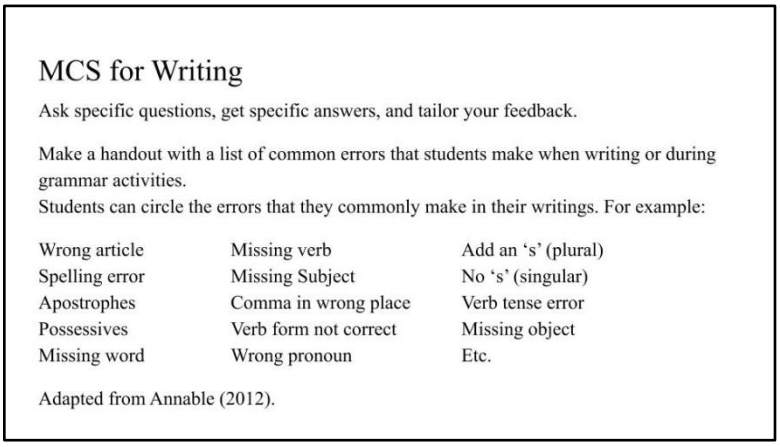
Figure 4.42 MCSs for Writing: Cloze Activity


MCSs for Writing
Beginner task: Grammar cloze activity (for example, verb fill-in-the-blank worksheet)
Teacher-led error check (initially)
Student-led error check (pair or group work) for subsequent tasks.
Students can think about these prompts (evaluating and planning):
Which types of verbs did I miss? (-ing, past tense, present tense, etc.) Why did miss them?
How are these verbs the same or different? What can I do to recognize them and get them correct now and on tomorrow's homework? Adapted from Annable (2012).
How can students monitor their work during the activity?
Note: This task can also be used in a listening activity (dictation, students fill in the blanks)

According to Anable (2012), it is important for instructors to ask specific questions and get specific answers about learning strategy use (Figure 4.43). Anable (2012) held that by using learning strategies, teachers can get more information with checklists about the types of errors that students are aware of. Instructors can share with students that many strategies can be used when checking their writing (rereading, focusing their attention to errors, requesting assistance), but each student may use different strategies that work for them (Anable, 2012; Griffiths, 2016, 2018).

Anable (2012) also pointed out that giving specific spelling or grammar examples such as "their/there/they're" can help students recall their common writing mistakes. Teachers can also give examples of correct verb usage, correct spellings, or apostrophes, for example, and students can search for correct usages of these words in short readings. More advanced students can write about the use of the specific grammar and how they can improve their use of it (Annable, 2012). Students can use MCSs to plan, monitor, and self-check their next writing task in combination with the cognitive strategies that were helpful to them during this type of activity.

Figure 4.43 MCS for Writing: Grammar Error-Check Activity



MCS for Writing

Ask specific questions, get specific answers, and tailor your feedback.

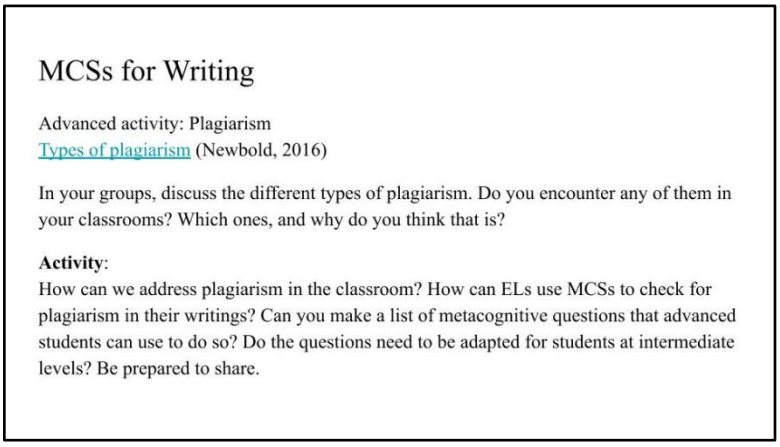
Make a handout with a list of common errors that students make when writing or during grammar activities.
Students can circle the errors that they commonly make in their writings. For example:

Wrong article	Missing verb	Add an 's' (plural)
Spelling error	Missing Subject	No 's' (singular)
Apostrophes	Comma in wrong place	Verb tense error
Possessives	Verb form not correct	Missing object
Missing word	Wrong pronoun	Etc.

Adapted from Annable (2012).

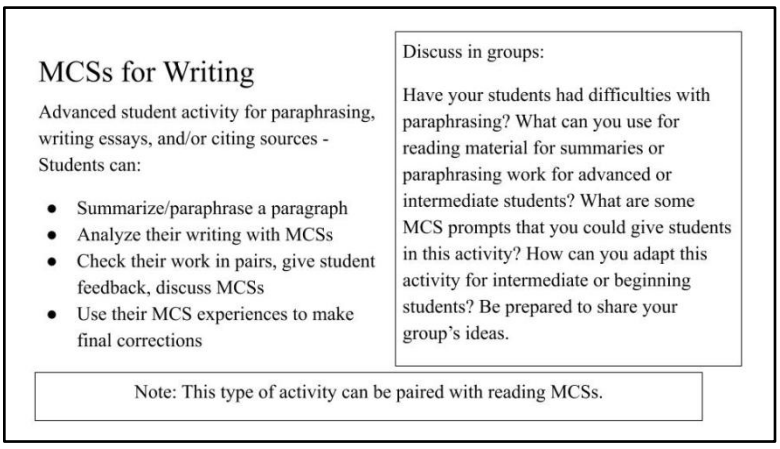
The next activity is tailored for advanced students and promotes awareness of the issue of plagiarism (Figure 4.44). The workshop instructor will share a personal classroom experience with ELs who had difficulties in paraphrasing short readings. Additionally, the discussion will mention that ELs from varying countries may view copying an author's work as a form of praise or admiration, and may not be aware of other cultural views, for example, that plagiarism is not acceptable in academic settings in the United States (Kaplan, 2005). This activity promotes participant awareness of cultural differences in writing and how to incorporate MCSs into advanced classroom tasks. Participants also have the opportunity to view the plagiarism website on the slide or look up the different types of plagiarism and create MCS lists for students to use in classroom activities.

Figure 4.44 MCSs for Writing: Advanced Classroom Activity


MCSs for Writing
Advanced activity: Plagiarism
Types of plagiarism (Newbold, 2016)
In your groups, discuss the different types of plagiarism. Do you encounter any of them in your classrooms? Which ones, and why do you think that is?
Activity:
How can we address plagiarism in the classroom? How can ELs use MCSs to check for plagiarism in their writings? Can you make a list of metacognitive questions that advanced students can use to do so? Do the questions need to be adapted for students at intermediate levels? Be prepared to share.

The following class discussion focuses on a paraphrasing activity for ELs using MCSs (Figure 4.45) in which participants create MCS questions for students. Working with paraphrasing in class helps students understand the writing process. Using MCSs to facilitate understanding can promote even further learning, especially if students work in groups to discuss strategies (Huang & Newbern, 2012; Liu & Goh, 2006; Nakatani, 2005; Teng, 2019a; Teng & Reynolds, 2019; Vandergrift & Goh, 2003). The activity can also be paired with a reading activity since reading and writing are correlated (Schoonen, 2019).

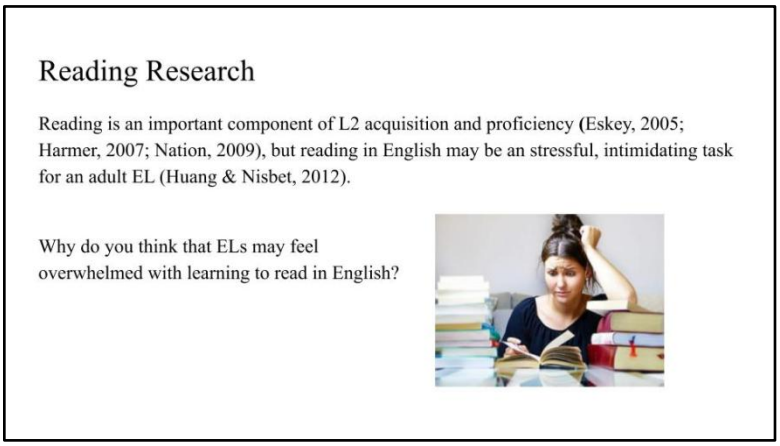
Figure 4.45 MCSs for Writing: Paraphrasing Activity


MCSs for Writing
Advanced student activity for paraphrasing, writing essays, and/or citing sources - Students can:
Summarize/paraphrase a paragraph
Analyze their writing with MCSs
Check their work in pairs, give student feedback, discuss MCSs
Use their MCS experiences to make final corrections
Discuss in groups:
Have your students had difficulties with paraphrasing? What can you use for reading material for summaries or paraphrasing work for advanced or intermediate students? What are some MCS prompts that you could give students in this activity? How can you adapt this activity for intermediate or beginning students? Be prepared to share your group's ideas.
Note: This type of activity can be paired with reading MCSs.

Reading.

ELs can be overwhelmed with L2 reading (Figure 4.46) because the script, alphabet, or direction of reading may be different from their L1 (Nation, 2009). Additionally, to make sense of new vocabulary, writing methods, and cultural differences, ELs must use diverse strategies and background knowledge (Huang & Nisbet, 2012). ELs who are less skilled readers may not be aware of learning strategies and may rely on word-for-word translations instead of reading for main points, while ELs with higher level of reading skills use more strategies like skimming, predicting, and checking for understanding (Huang & Nisbet, 2012). Research with MCSs and reading is important for instructors to know to be able to create activities for ELs at various learning levels.

Figure 4.46 Reading Research Adult ELs

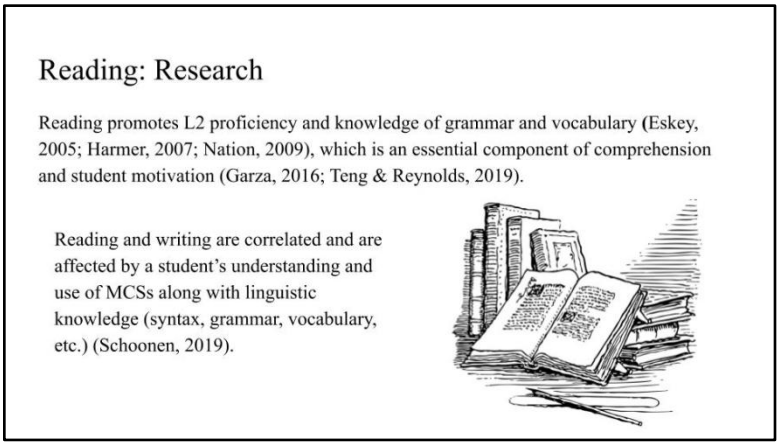

Reading Research
Reading is an important component of L2 acquisition and proficiency (Eskey, 2005; Harmer, 2007; Nation, 2009), but reading in English may be an stressful, intimidating task for an adult EL (Huang & Nisbet, 2012).
Why do you think that ELs may feel overwhelmed with learning to read in English?

Reading and writing skills are correlated and are affected by a students' knowledge of MCSs and of grammar, vocabulary, syntax, and other linguistic knowledge (Schoonen, 2019) (Figure 4.47). Therefore, instructors can modify writing activities to teach reading MCSs and to maximize comprehension and proficiency. Instructors can also modify such activities to address

one domain at a time for beginning or intermediate students.

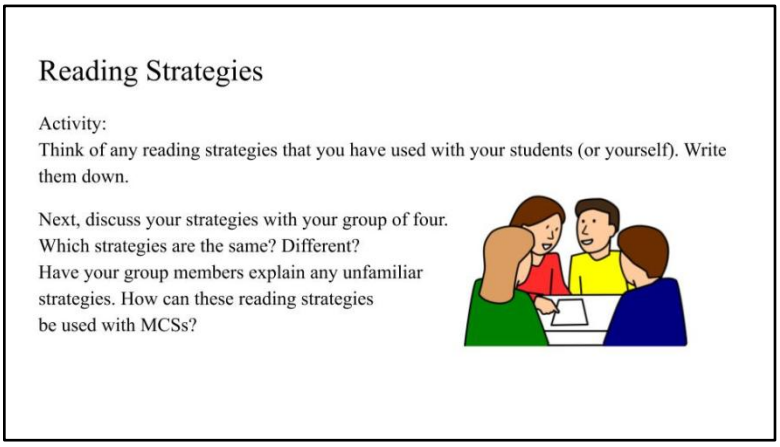
Furthermore, ELs can present with diverse reading skills, even in the same learning level. MCSs that are explicitly taught and used with reading activities can promote reading skills and higher student outcomes at various learning levels (Cubukcu, 2008; Huang & Newbern, 2012; Rastegar et al., 2017; Rusciolelli, 1995; Teng & Reynolds, 2019), especially in group work (Huang & Newbern, 2012; Teng & Reynolds, 2019), and when paired with other reading strategies or content (Griffiths, 2016, 2018; Macaro, 2006).

Figure 4.47 Reading Research: Proficiency


Reading: Research
Reading promotes L2 proficiency and knowledge of grammar and vocabulary (Eskey, 2005; Harmer, 2007; Nation, 2009), which is an essential component of comprehension and student motivation (Garza, 2016; Teng & Reynolds, 2019).
Reading and writing are correlated and are affected by a student's understanding and use of MCSs along with linguistic knowledge (syntax, grammar, vocabulary, etc.) (Schoonen, 2019).

Workshop attendees participate in an individual and group activity to gather reading strategies and to promote the creation of student activities that combine MCSs with other learning strategies (Figure 4.48). This activity also provides participants with material that can be used in the final group project at the end of the workshop.

Figure 4.48 Reading Strategies Activity


Reading Strategies
Activity:
Think of any reading strategies that you have used with your students (or yourself). Write them down.
Next, discuss your strategies with your group of four.
Which strategies are the same? Different?
Have your group members explain any unfamiliar strategies. How can these reading strategies be used with MCSs?

A non-exhaustive list of reading strategies that can be used with MCSs in Figure 4.49 adds to the discussion of the previous slide. Eskey (2005) reported that reading strategies such as skimming, engaging in prior knowledge, and discussions about textual understandings had greater achievement outcomes when paired with MCSs so that ELs can have better knowledge of when, why, and how to use such strategies.

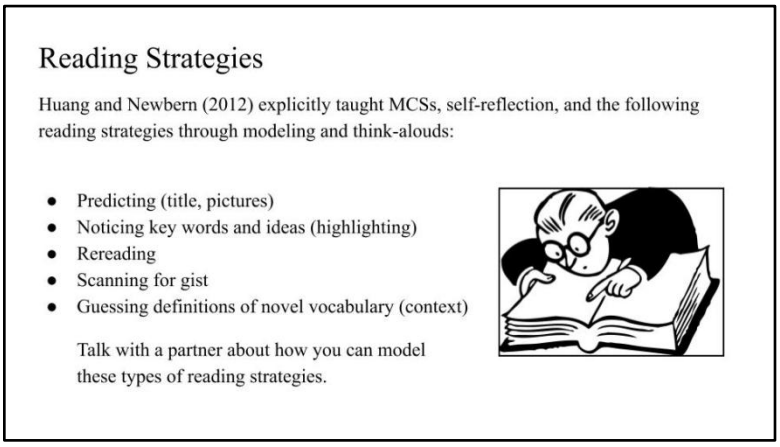
Furthermore, with explicit strategy instruction, readers can monitor comprehension along with their strengths and weaknesses in reading tasks, and can check their understanding of what they have read by quizzing themselves or by rereading for clarification (Pintrich, 2002). Students can also self-regulate while reading through monitoring their comprehension, for example (Zadina, 2014). Students who have higher levels of reading abilities may independently use some MCSs such as monitoring their understanding of the text, reflection, generalizing content, or making predictions (Huang & Nisbet, 2012; Sheorey & Mokhtari, 2001).

In contrast, beginning students may only concentrate on understanding the vocabulary or attempt to translate texts verbatim (Cromely, 2005; Huang & Nisbet, 2012; Rusciolelli, 1995). However, readers at low proficiency levels can attain proficiency if they learn how to monitor

their understandings of texts and use reading strategies such as paraphrasing, asking questions, re-reading passages, using background knowledge, making revisions, choosing strategies, setting task goals (Cubukcu, 2008), making predictions and guessing meanings by analyzing parts of speech and relating words to context (Rusciolelli, 1995).

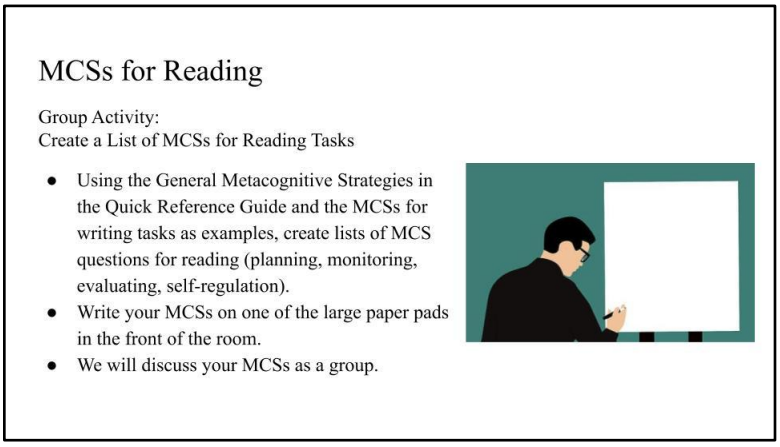
Additionally, a discussion about how to model reading and metacognitive strategies will prepare participants for another upcoming activity in the workshop.

Figure 4.49 Reading Strategies Examples


Reading Strategies
Huang and Newbern (2012) explicitly taught MCSs, self-reflection, and the following reading strategies through modeling and think-alouds:
Predicting (title, pictures)
Noticing key words and ideas (highlighting)
Rereading
Scanning for gist
Guessing definitions of novel vocabulary (context)
Talk with a partner about how you can model these types of reading strategies.

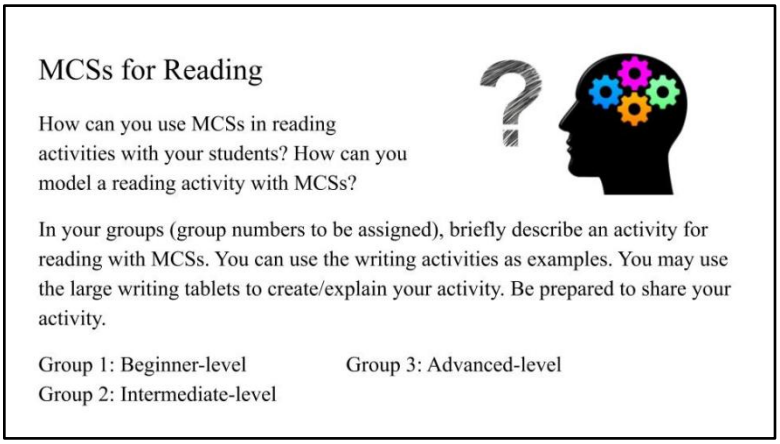
The activity described in Figure 4.50 allows participant groups the opportunity to create a list of MCSs for reading tasks in the reading MCS section in the Quick Reference Guide (see Appendix A, Figure A6). Sharing their work as a large class discussion allows collaborative learners to forge deeper understandings (Prytula, 2012).

Figure 4.50 Activity for Creating MCS Questions for Reading


MCSs for Reading
Group Activity:
Create a List of MCSs for Reading Tasks
Using the General Metacognitive Strategies in the Quick Reference Guide and the MCSs for writing tasks as examples, create lists of MCS questions for reading (planning, monitoring, evaluating, self-regulation).
Write your MCSs on one of the large paper pads in the front of the room.
We will discuss your MCSs as a group.

Next, participant groups create reading activities with MCSs in beginner, intermediate, and advanced-level activities for ELs (Figure 4.51) to promote research-based learning.

Figure 4.51 Activity for Reading with MCSs

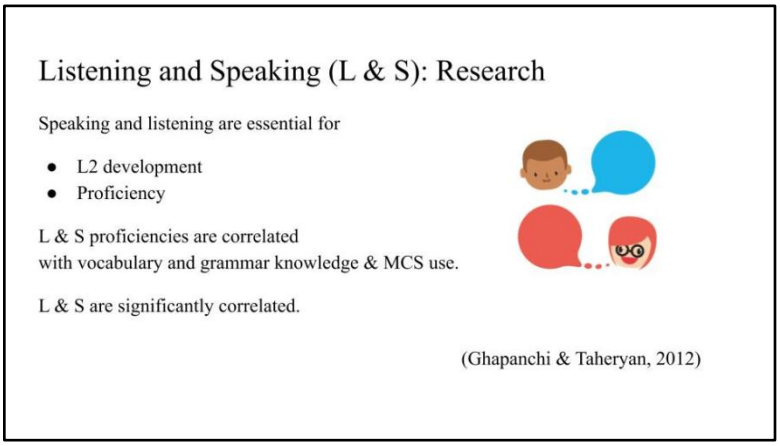

MCSs for Reading
How can you use MCSs in reading activities with your students? How can you model a reading activity with MCSs?
In your groups (group numbers to be assigned), briefly describe an activity for reading with MCSs. You can use the writing activities as examples. You may use the large writing tablets to create/explain your activity. Be prepared to share your activity.
Group 1: Beginner-level
Group 2: Intermediate-level
Group 3: Advanced-level

Listening and Speaking.

According to Ghapanchi and Taheryan (2012), listening and speaking skills are significantly correlated and are important within L2 learning contexts, as are ESL/EFL classroom discussions to facilitate and assess comprehension and to promote clarification (Figure

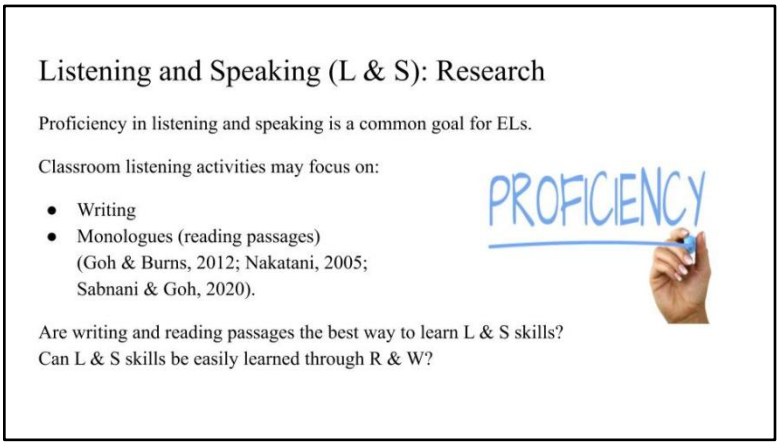
4.52). Ghapanchi and Taheryan's (2012) study pointed out significant correlations and outcomes with the combination of MCSs and language domain learning; specifically, there are significant correlations between listening and speaking proficiencies and the knowledge of vocabulary and grammar, along with the use of MCSs.

Figure 4.52 Listening and Speaking Correlations


Listening and Speaking (L & S): Research
Speaking and listening are essential for
L2 development
Proficiency
L & S proficiencies are correlated
with vocabulary and grammar knowledge & MCS use.
L & S are significantly correlated.
(Ghapanchi & Taheryan, 2012)

Most ELs want to gain proficiencies in listening and speaking (Figure 4.53), but classroom activities may not have the necessary rigor to promote academic learning or learning for fluency (Goh & Burns, 2012). The discussion focuses on whether listening and speaking skills can be passively learned through reading and writing, which engages critical thinking and prior knowledge.

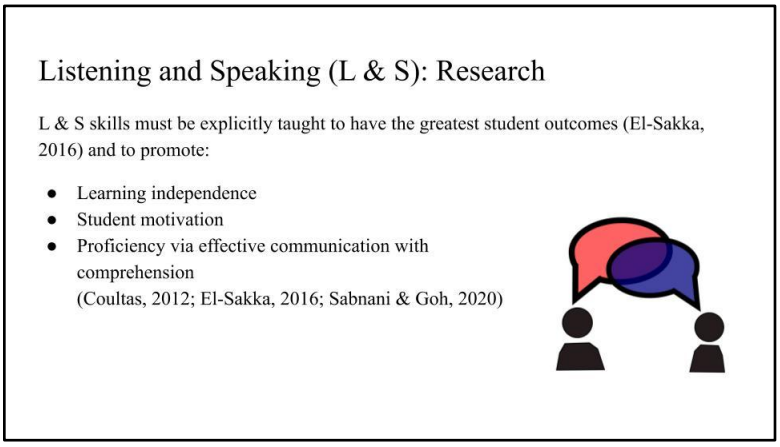
Figure 4.53 Listening and Speaking Proficiencies


Listening and Speaking (L & S): Research
Proficiency in listening and speaking is a common goal for ELs.
Classroom listening activities may focus on:
Writing
Monologues (reading passages)
(Goh & Burns, 2012; Nakatani, 2005;
Sabnani & Goh, 2020).
PROFICIENCY
Are writing and reading passages the best way to learn L & S skills?
Can L & S skills be easily learned through R & W?

Explicit instruction of listening and speaking skills maximizes student learning, proficiency, and motivation (Figure 4.54). Vandergrift (2003) suggested that with explicit teaching of MCSs with listening strategies, students can collaborate for successful application of the strategies to promote proficient listening skills. Likewise, Panggabean and Triassanti (2020) also found that explicit MCS instruction with speaking strategies promoted oral presentation proficiency and student confidence.

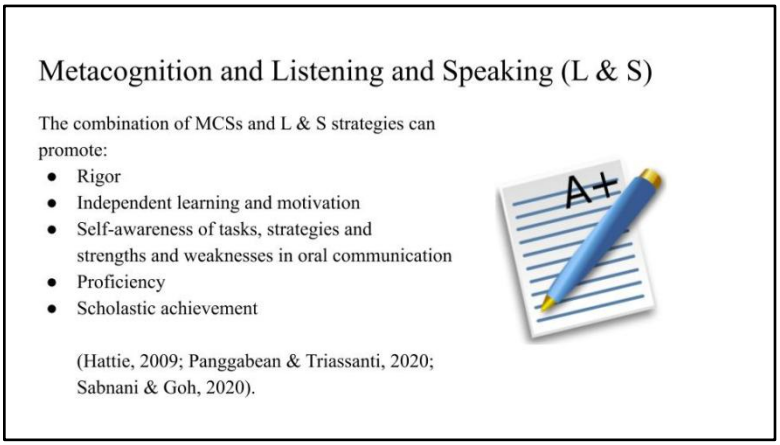
Moreover, the use of MCSs should endeavor to foster student self-awareness of their roles, goals, needs, and methods as L2 listeners (Vandergrift & Goh, 2012). The use of MCSs during listening tasks can improve listening skills among ELs and helps them become more successful through self-regulation (Rahimirad, 2014). Successful students use a variety of learning strategies and have knowledge of MCSs and their difficulties during listening tasks, which can be a result of explicit instruction in the classroom (Goh, 2000; Vandergrift et al., 2006).

Figure 4.54 Listening and Speaking Benefits of Explicit Instruction


Listening and Speaking (L & S): Research
L & S skills must be explicitly taught to have the greatest student outcomes (El-Sakka, 2016) and to promote:
Learning independence
Student motivation
Proficiency via effective communication with comprehension
(Coultas, 2012; El-Sakka, 2016; Sabnani & Goh, 2020)

When listening and speaking strategies are combined with MCSs (Figure 4.55), students can gain proficiency skills in listening and speaking (Hattie, 2009; Panggabean & Triassanti, 2020; Sabnani & Goh, 2020). Goh and Burns (2012) reported that some classroom speaking activities may not fully prepare ELs for academic or workplace interactions and may lack rigor or substance (content). In this vein, Nakatani (2005) pointed out that group conversations about general speaking strategies likely do not lead to higher outcomes and language domain proficiency skills, unless this student collaboration was paired with MCSs as students navigated the strategies and learned how to use them. Classroom discussions are an important part of ELs' education, especially since output is essential for promoting speaking proficiency (Goh & Burns, 2012; Swain, 2005). When students work together on conversation skills, they engage in linguistic problem-solving and language-building, which later leads to independent learning (Swain, 2005).

Figure 4.55 Metacognition and Listening and Speaking


Metacognition and Listening and Speaking (L & S)
The combination of MCSs and L & S strategies can promote:
Rigor
Independent learning and motivation
Self-awareness of tasks, strategies and strengths and weaknesses in oral communication
Proficiency
Scholastic achievement
(Hattie, 2009; Panggabean & Triassanti, 2020; Sabnani & Goh, 2020).
A+

Furthermore, feedback in ESL/EFL classrooms is important to promote listening and speaking skills (Figure 4.56). In student discussions, peer and teacher oral feedback is helpful to allow a speaker to make corrections to his oral output. For example, feedback can be in the form of a clarification request for meaning that can allow speakers to focus on how others hear and understand their speech (Goh & Burns, 2012; Long, 1983; Long, 1996). This type of feedback helps ELs gain L2 skills and proficiency (Mackey, 2007; Swain, 2005). Furthermore, Nakatani (2005) reported that feedback combined with MCSs and group discussions significantly correlated with increased speaking skills.

Figure 4.56 Listening and Speaking: Feedback

Listening and Speaking (L & S): Research
As students interact with others, speakers can get feedback and make output adjustments and can focus on accuracy and comprehension, thereby facilitating their L2 skills (Mackey, 2007; Swain, 2005).
feedback

In the next two slides (Figures 4.57 and 4.58), participants work individually and in groups to compile listening strategies and to promote the development of classroom activities that combine MCSs with other learning strategies. This activity also provides participants with material that can be used in the final group project at the end of the workshop.

Figure 4.57 Listening Strategies Activity

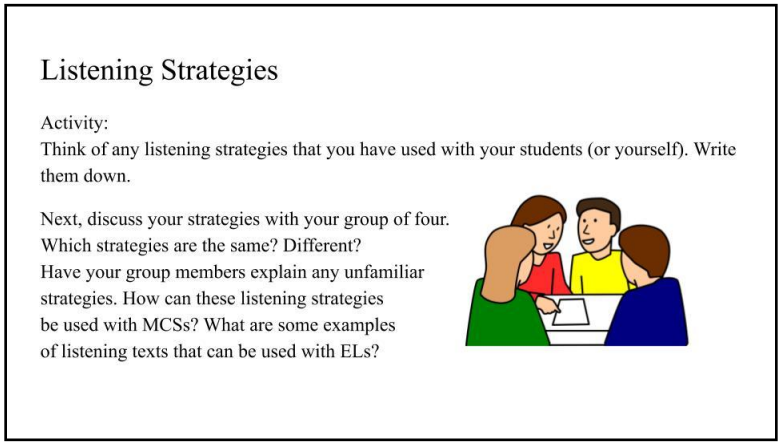
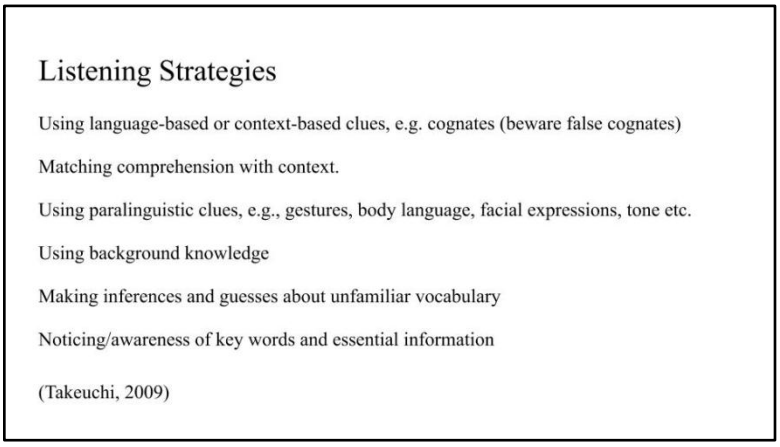

Listening Strategies
Activity:
Think of any listening strategies that you have used with your students (or yourself). Write them down.
Next, discuss your strategies with your group of four.
Which strategies are the same? Different?
Have your group members explain any unfamiliar strategies. How can these listening strategies be used with MCSs? What are some examples of listening texts that can be used with ELs?

Figure 4.58 Listening Strategies


Listening Strategies
Using language-based or context-based clues, e.g. cognates (beware false cognates)
Matching comprehension with context.
Using paralinguistic clues, e.g., gestures, body language, facial expressions, tone etc.
Using background knowledge
Making inferences and guesses about unfamiliar vocabulary
Noticing/awareness of key words and essential information
(Takeuchi, 2009)

Vandergrift (2003) reported that college beginning-level L2 students participated in a teacher-led listening task to promote strategy use and awareness (Figures 4.59, 4.60, and 4.61). After making predictions, completing three listening activities, and checking new vocabulary and content comprehension, students worked in pairs and in groups to discuss strategy use and understanding of the audio. Students also wrote in journals their self-reflections on their learning process, strategy use and effectiveness, and plans to modify listening strategies in the future. Through collaboration, the students had access to and used more strategies, had more predictions, motivation, and comprehension.

By using prediction as a listening strategy, students can better understand that listening is an active process and that using prior knowledge is an important part of the listening task to interpret what they hear (Vandergrift, 2003). This understanding can boost motivation to engage in these types of listening activities, work with authentic texts, and to use these strategies outside of the classroom setting (Vandergrift, 2003), which promotes generalizability and automaticity (Macaro, 2006).

Figure 4.59 Listening Strategies: Research

Listening Strategies: Research

Vandergrift (2003) used the following strategies in a grammar-focused listening activity with explicit teaching and use of MCSs:

- Making predictions
- Planning
- Selective attention
- Problem-solving
- Evaluating
- Monitoring

Beginning-level L2 college students

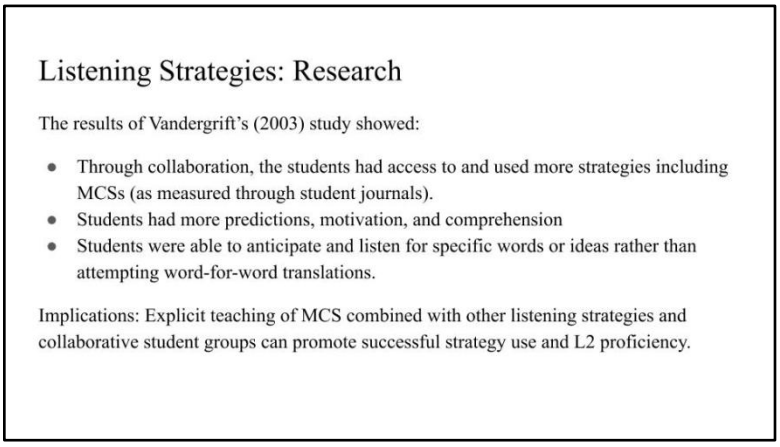
Figure 4.60 Listening Strategies: Research Listening Tasks

Listening Strategies: Research

In Vandergrift's study (2003), students completed the following tasks:

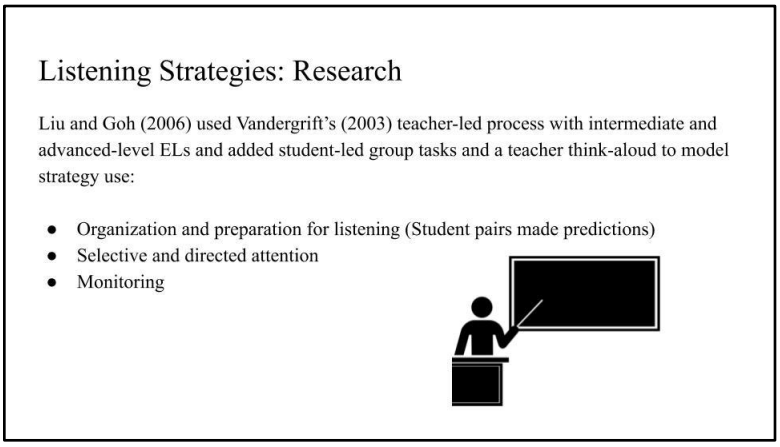
Prior to listening: Write predictions for the listening task.
During first listening: Write new information and vocabulary.
Work in pairs to check your work and your understanding of the listening.
After second listening: Work in groups and discuss which strategies worked for understanding.
After third listening: Journal about the learning process, strategy use and effectiveness, and plans to modify strategies in the future.

Figure 4.61 Listening Strategies: Research Implications


Listening Strategies: Research
The results of Vandergrift's (2003) study showed:
Through collaboration, the students had access to and used more strategies including MCSs (as measured through student journals).
Students had more predictions, motivation, and comprehension
Students were able to anticipate and listen for specific words or ideas rather than attempting word-for-word translations.
Implications: Explicit teaching of MCS combined with other listening strategies and collaborative student groups can promote successful strategy use and L2 proficiency.

Liu and Goh's (2006) study (Figure 4.62) followed Vandergrift's (2003) teacher-led format for instructing listening strategies with MCSs, and added a student-led portion along with a teacher think-aloud. Goh and Hu (2014) reported that EL use of MCSs such as directed attention and problem-solving can be promoted through methods such as think-alouds, listening journals, questionnaires, and post-listening reflections, especially with students with high levels of listening proficiency.

Figure 4.62 Listening Strategies Research: MCSs


Listening Strategies: Research
Liu and Goh (2006) used Vandergrift's (2003) teacher-led process with intermediate and advanced-level ELs and added student-led group tasks and a teacher think-aloud to model strategy use:
Organization and preparation for listening (Student pairs made predictions)
Selective and directed attention
Monitoring

In student-led tasks, Liu and Goh (2006) facilitated EL self-regulation and independent learning (Figure 4.63). EL groups listened to their chosen audio texts, monitored their comprehension, and discussed their notes, difficulties, content points and ideas. After repeated listening, students discussed strategy use and effectiveness, assessed their understanding of the passage, selected strategies for future listening tasks, and discussed listening and comprehension difficulties (Liu & Goh, 2006).

Figure 4.63 Listening Strategies: Student-Led Tasks

Listening Strategies: Research
In Liu & Goh's (2006) student-led tasks, ELs:
Selected their listening topics and materials (from a pre-selected list)
Set their groups' listening goals
Made predictions (vocabulary, content)
Anticipated comprehension problems
Selected listening strategies

MCS use in self-reflection prompts for listening activities promote learning (Figures 4.64, 4.65, and 4.66) (Liu & Goh, 2006). Instructors who teach ELs to use metacognitive strategies such as predicting, monitoring, planning, evaluating, and problem-solving during listening activities can promote student self-regulation through classroom or peer discussions, and reflective journaling. ELs reported success with such strategies for increased comprehension, motivation, and confidence during listening tasks and peer collaboration (Liu & Goh, 2006; Vandergrift, 2003).

Workshop participants create and write monitoring questions in the Student-Led

Listening Reflection Guide in the Quick Reference Guide (see Appendix A, Figure A7).

Figure 4.64 Listening and MCSs: Planning

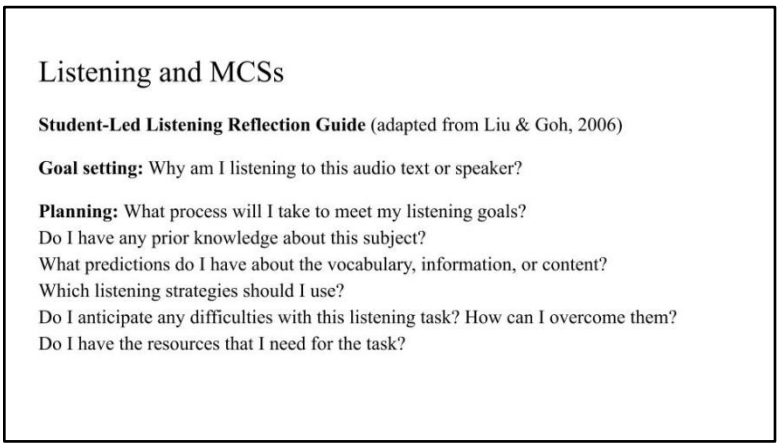

Listening and MCSs
Student-Led Listening Reflection Guide (adapted from Liu & Goh, 2006)
Goal setting: Why am I listening to this audio text or speaker?
Planning: What process will I take to meet my listening goals?
Do I have any prior knowledge about this subject?
What predictions do I have about the vocabulary, information, or content?
Which listening strategies should I use?
Do I anticipate any difficulties with this listening task? How can I overcome them?
Do I have the resources that I need for the task?

Figure 4.65 Listening and MCSs: Monitoring

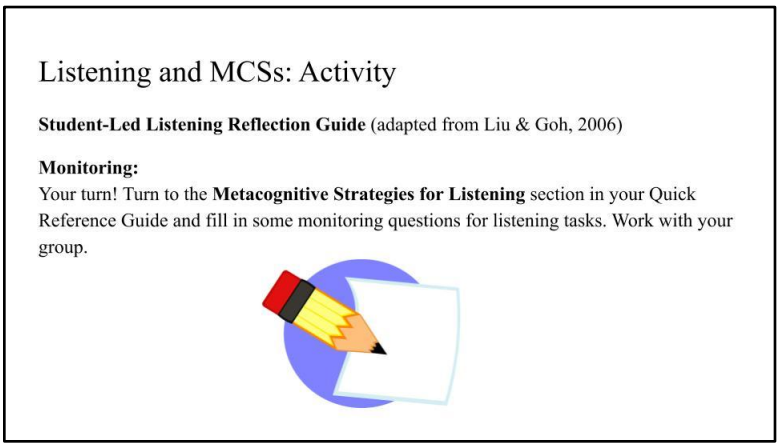
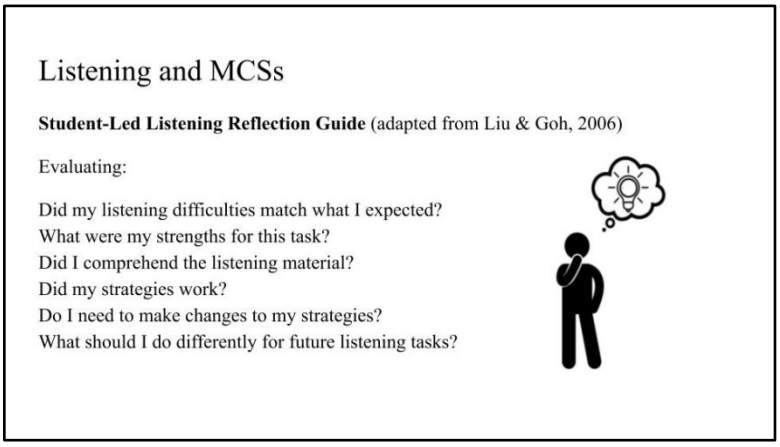

Listening and MCSs: Activity
Student-Led Listening Reflection Guide (adapted from Liu & Goh, 2006)
Monitoring:
Your turn! Turn to the Metacognitive Strategies for Listening section in your Quick Reference Guide and fill in some monitoring questions for listening tasks. Work with your group.

Figure 4.66 Listening and MCSs: Evaluating

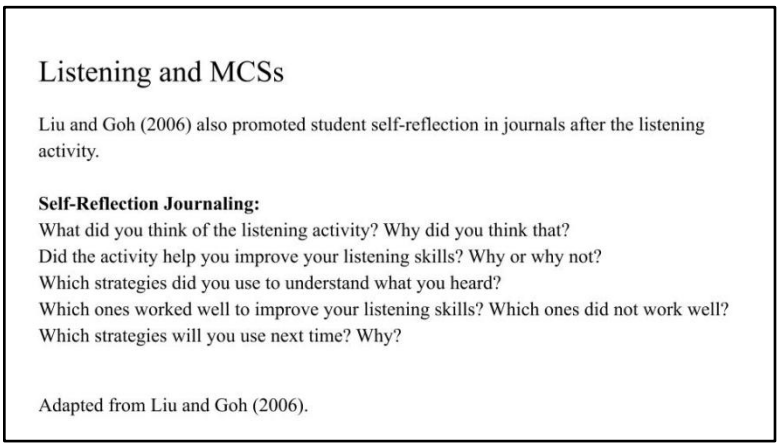

Listening and MCSs
Student-Led Listening Reflection Guide (adapted from Liu & Goh, 2006)
Evaluating:
Did my listening difficulties match what I expected?
What were my strengths for this task?
Did I comprehend the listening material?
Did my strategies work?
Do I need to make changes to my strategies?
What should I do differently for future listening tasks?

Journaling for self-reflection about learning strategies and MCSs can be a part of student achievement and L2 proficiency (Liu & Goh, 2006), especially with teacher feedback on journal entries (Hartman, 2001). Liu and Goh (2006) suggested the use of listening journals and discussion as an effective way for ELs to learn listening skills with MCSs (Figure 4.67 and Figure 4.68). Questionnaires and journals are commonly used to promote student awareness and use of MCSs through reflection which can provide opportunities for ELs to think about their listening goals, any difficulties they experience during L2 listening, or any circumstances (personal or environmental) that limited or promoted listening (Vandergrift & Goh, 2012). Listening journals can also promote peer-to-peer learning with adult ELs because in classroom discussions of their writings, and as ELs reflect on their own strategy use, students can learn from each other (Liu & Goh, 2006; Matsumoto, 1996).

Anderson (2005) pointed out the need for instructors to provide students with prompts for their journal entries that focus on specific learning tasks. For example, if the learning activity focuses on MCSs, then journal prompts can encourage reflection on strategy selection, use, effectiveness, student strengths and weaknesses in completing the task, and more

The journal prompts in Figure 4.67 and Figure 4.68 are also found in the Quick Reference Guide (see Appendix A, Figure A8 and Figure A9). These journal prompts can easily be combined into one list or converted to reflection prompts for any of the other language domains. Furthermore, any of the MCS lists with questions included in The Quick Reference Guide (see Appendix A) can be used as journaling prompts to focus on MCSs.

Figure 4.67 Listening and MCSs: Self-Reflection Journaling



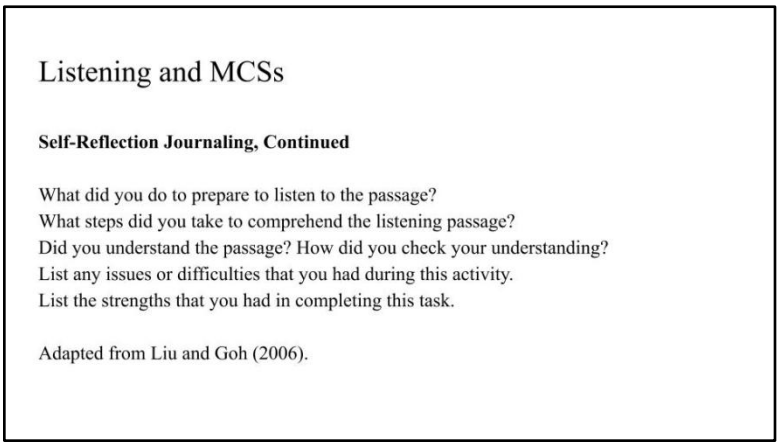
Listening and MCSs

Liu and Goh (2006) also promoted student self-reflection in journals after the listening activity.

Self-Reflection Journaling:
What did you think of the listening activity? Why did you think that?
Did the activity help you improve your listening skills? Why or why not?
Which strategies did you use to understand what you heard?
Which ones worked well to improve your listening skills? Which ones did not work well?
Which strategies will you use next time? Why?

Adapted from Liu and Goh (2006).

Figure 4.68 Listening and MCSs: Self-Reflection Journaling, Continued



Listening and MCSs

Self-Reflection Journaling, Continued

What did you do to prepare to listen to the passage?
What steps did you take to comprehend the listening passage?
Did you understand the passage? How did you check your understanding?
List any issues or difficulties that you had during this activity.
List the strengths that you had in completing this task.

Adapted from Liu and Goh (2006).

Participants will have the opportunity to use their listening skills in an activity (Figures 4.69, 4.70, and 4.71). The participants will listen to the audio of the YouTube video, "How English sounds to non-English speakers" (Brian & Karl, 2011), a video of two people preparing dinner and speaking gibberish in English. After listening to the video, students use MCSs and group discussions with prompts to process what they heard, and then watch the video to get visual cues and context. This activity simulates what ELs may experience with classroom listening activities and allows instructors to analyze how to create these types of classroom learning tasks with MCSs.

Figure 4.69 Listening Activity: Video

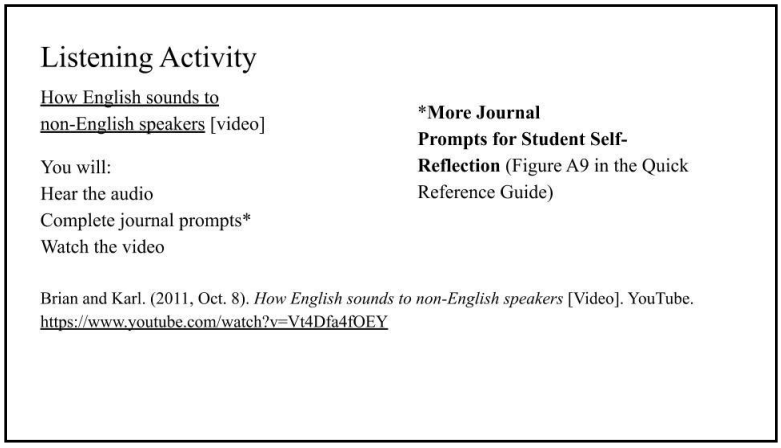
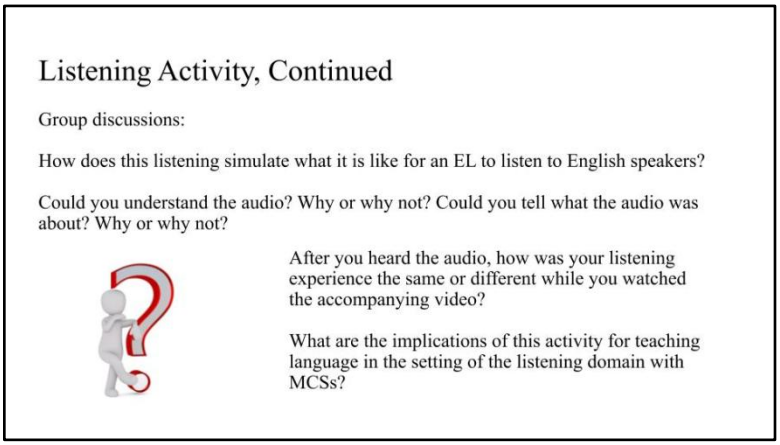
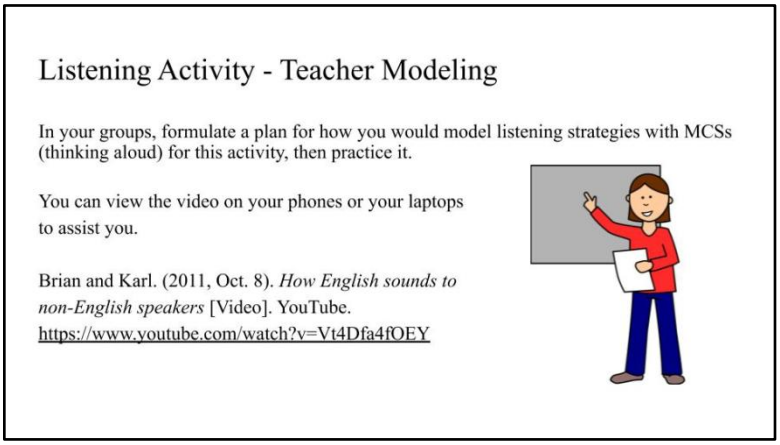

Listening Activity
How English sounds to non-English speakers [video]
You will:
Hear the audio
Complete journal prompts*
Watch the video
*More Journal Prompts for Student Self-Reflection (Figure A9 in the Quick Reference Guide)
Brian and Karl. (2011, Oct. 8). How English sounds to non-English speakers [Video]. YouTube. https://www.youtube.com/watch?v=Vt4Dfa4fOEY

Figure 4.70 Listening Activity: Discussion


Listening Activity, Continued
Group discussions:
How does this listening simulate what it is like for an EL to listen to English speakers?
Could you understand the audio? Why or why not? Could you tell what the audio was about? Why or why not?
After you heard the audio, how was your listening experience the same or different while you watched the accompanying video?
What are the implications of this activity for teaching language in the setting of the listening domain with MCSs?

In the next activity (Figure 4.71) students create a method for modeling (thinking aloud) the listening activity in Figure 4.69 with MCSs and listening strategies. Instructor modeling as a support for ELs has been an effective part of MCS and domain strategy instruction in classrooms (Huang & Newbern, 2012; Ness & Kenny, 2016)

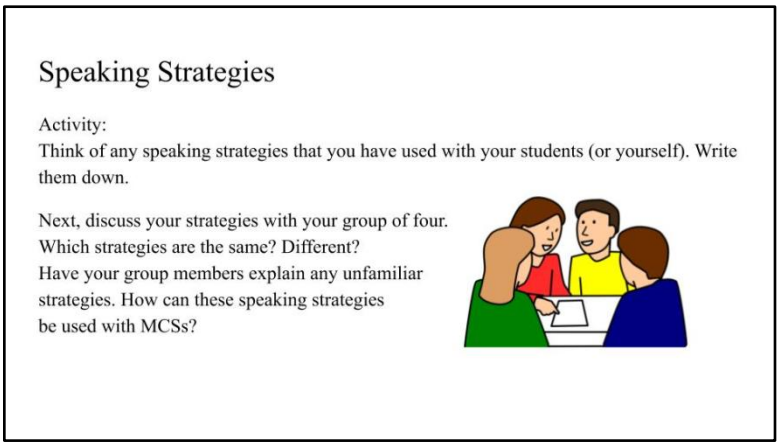
Figure 4.71 Listening Activity: Teacher Modeling


Listening Activity - Teacher Modeling
In your groups, formulate a plan for how you would model listening strategies with MCSs (thinking aloud) for this activity, then practice it.
You can view the video on your phones or your laptops to assist you.
Brian and Karl. (2011, Oct. 8). How English sounds to non-English speakers [Video]. YouTube.
https://www.youtube.com/watch?v=Vt4Dfa4fOEY

Next, an individual and group activity (Figure 4.72) promotes awareness of speaking strategies and the development of classroom activities that combine MCSs with other learning

strategies. This activity also provides participants with material that can be used in the final group project at the end of the workshop.

Figure 4.72 Speaking Strategies Activity

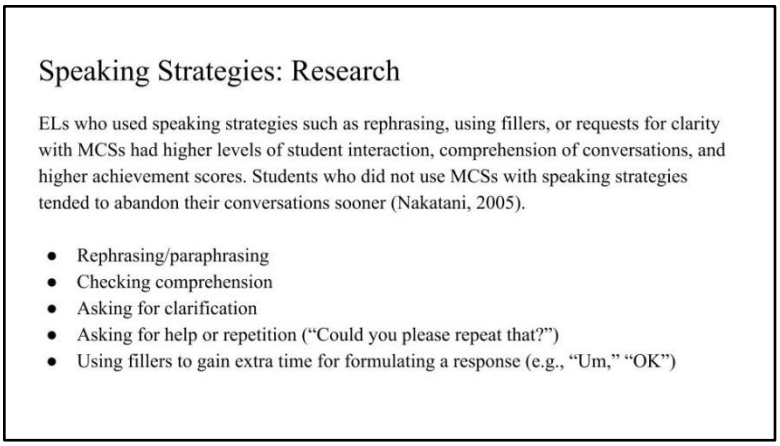

Speaking Strategies
Activity:
Think of any speaking strategies that you have used with your students (or yourself). Write them down.
Next, discuss your strategies with your group of four.
Which strategies are the same? Different?
Have your group members explain any unfamiliar strategies. How can these speaking strategies be used with MCSs?

Nakatani (2005) examined adult EL students' speaking strategy use and awareness (Figure 4.73). These students reported lack of speaking strategy knowledge, conversational skills, and difficulties knowing how to focus on their spoken words, syntax, and grammar. Nakatani (2005) pointed out that college-level EFL students had difficulty with speaking skills such as paying attention to grammar, parts of speech, and focusing on their dialogue with others, e.g., comprehensibility.

In Nakatani's (2005) study, the experimental group (EG) received explicit instruction on MCSs to use with various speaking skills. The control group (CG) used various speaking strategies but received no instruction on MCSs. Students in the CG spent more time dialoguing in pairs or groups than did the EG, but the EG had significantly higher outcome scores for proficiency on post-tests than the CG. The results showed that the use of MCSs with group discussions was significantly correlated with higher proficiency achievement scores than group

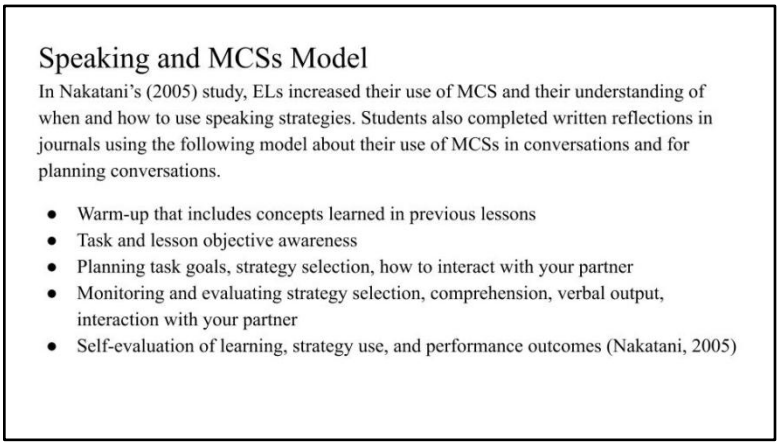
or paired conversations alone. The CG was more likely to abandon the discussion and usually did not have awareness of which strategies to use. The EG combined MCSs with speaking strategies to promote discussions and group comprehension and interactions (Nakatani, 2005).

Figure 4.73 Speaking Strategies: Research


Speaking Strategies: Research
ELs who used speaking strategies such as rephrasing, using fillers, or requests for clarity with MCSs had higher levels of student interaction, comprehension of conversations, and higher achievement scores. Students who did not use MCSs with speaking strategies tended to abandon their conversations sooner (Nakatani, 2005).
Rephrasing/paraphrasing
Checking comprehension
Asking for clarification
Asking for help or repetition ("Could you please repeat that?")
Using fillers to gain extra time for formulating a response (e.g., "Um," "OK")

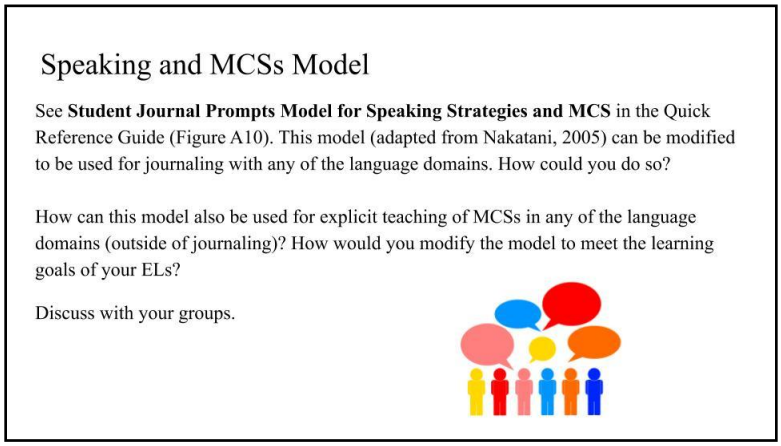
Nakatani (2005) also promoted a model for working with MCSs and speaking strategies (Figure 4.74) in which ELs increased their use of MCSs and their understanding of when and how to use speaking strategies. Nakatani (2005) also pointed out the importance of using journaling as a means for student self-reflection to promote MCS use and proficiency. Students can self-evaluate their speaking activities and set goals for improvement, using MCSs to plan, monitor, and evaluate (Nakatani, 2005; Sabnani & Goh, 2020).

Figure 4.74 Speaking and MCSs Model


Speaking and MCSs Model
In Nakatani's (2005) study, ELs increased their use of MCS and their understanding of when and how to use speaking strategies. Students also completed written reflections in journals using the following model about their use of MCSs in conversations and for planning conversations.
Warm-up that includes concepts learned in previous lessons
Task and lesson objective awareness
Planning task goals, strategy selection, how to interact with your partner
Monitoring and evaluating strategy selection, comprehension, verbal output, interaction with your partner
Self-evaluation of learning, strategy use, and performance outcomes (Nakatani, 2005)

An example of journaling prompts for speaking with MCSs in the Quick Reference Guide (see Appendix A, Figure A10) can be modified to use with the other three language domains. Workshop participants can discuss how to modify and use the prompts in other contexts (Figure 4.75).

Figure 4.75 Speaking and MCSs Model: Student Journal Prompts


Speaking and MCSs Model
See Student Journal Prompts Model for Speaking Strategies and MCS in the Quick Reference Guide (Figure A10). This model (adapted from Nakatani, 2005) can be modified to be used for journaling with any of the language domains. How could you do so?
How can this model also be used for explicit teaching of MCSs in any of the language domains (outside of journaling)? How would you modify the model to meet the learning goals of your ELs?
Discuss with your groups.

The use of checklists and rubrics facilitate MCS use with speaking activities (Sabnani & Goh, 2020) (Figures 4.76 and 4.77). ELs can use such devices to monitor their performance with any of the language domains, so it is important for instructors to know how to modify these instruments to promote learning.

Figure 4.76 Speaking and MCSs: Checklists

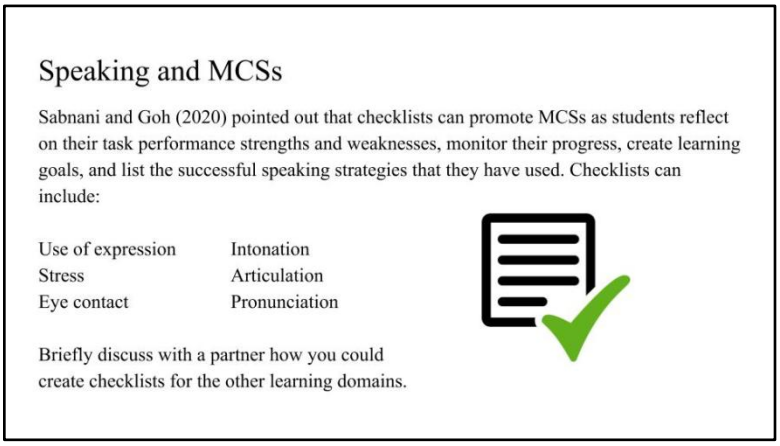
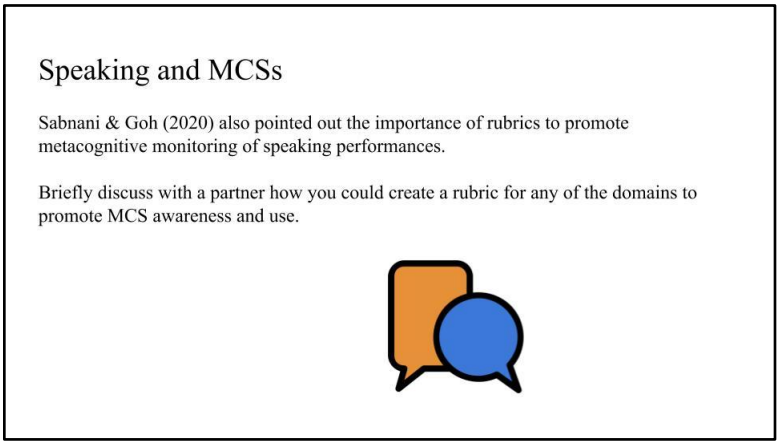

Speaking and MCSs
Sabnani and Goh (2020) pointed out that checklists can promote MCSs as students reflect on their task performance strengths and weaknesses, monitor their progress, create learning goals, and list the successful speaking strategies that they have used. Checklists can include:
Use of expression
Stress
Eye contact
Intonation
Articulation
Pronunciation
Briefly discuss with a partner how you could create checklists for the other learning domains.

Figure 4.77 Speaking and MCSs: Rubrics


Speaking and MCSs
Sabnani & Goh (2020) also pointed out the importance of rubrics to promote metacognitive monitoring of speaking performances.
Briefly discuss with a partner how you could create a rubric for any of the domains to promote MCS awareness and use.

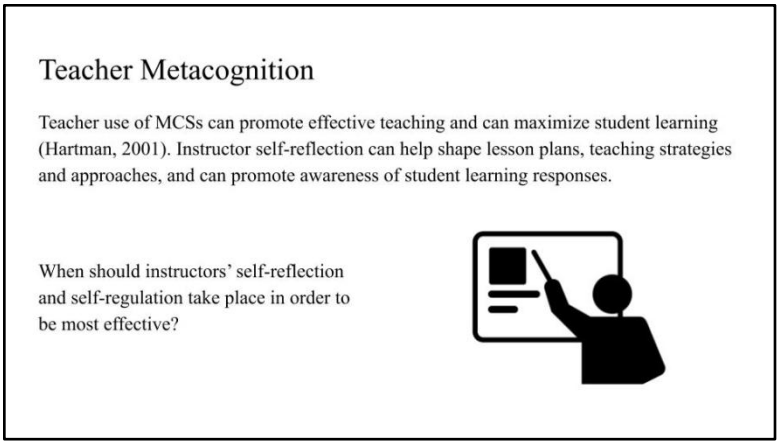
Part Three

Teacher metacognition.

In the next section (Figure 4.78), the participants discuss how to be metacognitively aware and how to self-reflect on their lessons and teaching methods in order to facilitate learning. When teachers use MCSs for self-reflection, they promote their own development and that of their students (Hartman, 2001) (Figure 4.79).

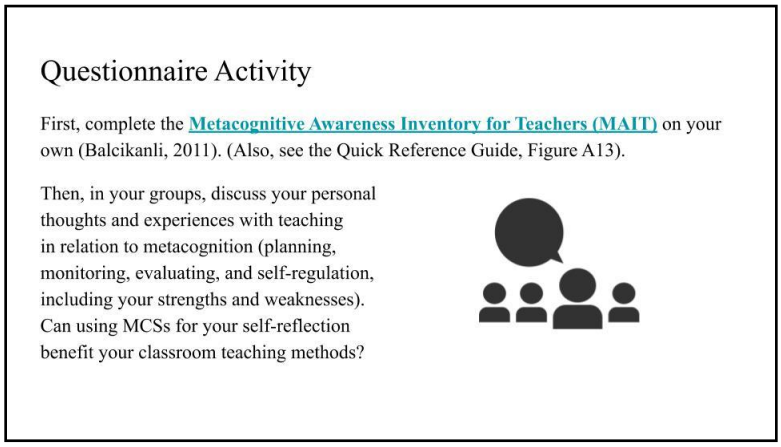
Figure 4.78 Teacher Metacognition

Figure 4.79 Teacher Metacognition: Self-Reflection


Teacher Metacognition
Teacher use of MCSs can promote effective teaching and can maximize student learning (Hartman, 2001). Instructor self-reflection can help shape lesson plans, teaching strategies and approaches, and can promote awareness of student learning responses.
When should instructors' self-reflection and self-regulation take place in order to be most effective?

The next activity (Figure 4.80) explores the Metacognitive Awareness Inventory for Teachers (MAIT), which is accessible in the public domain at https://www.researchgate.net/publication/288164850_Metacognitive_awareness_inventory_for_teachers_MAIT. Participants can access the inventory on their computers or see the inventory displayed on the screen in the presentation via the website. A paper copy of the inventory is also available. Information about the MAIT is in the Quick Reference Guide (see Appendix A, Figure A13)

Figure 4.80 Questionnaire Activity


Questionnaire Activity
First, complete the Metacognitive Awareness Inventory for Teachers (MAIT) on your own (Balcikanli, 2011). (Also, see the Quick Reference Guide, Figure A13).
Then, in your groups, discuss your personal thoughts and experiences with teaching in relation to metacognition (planning, monitoring, evaluating, and self-regulation, including your strengths and weaknesses). Can using MCSs for your self-reflection benefit your classroom teaching methods?

The classroom discussion for the next three slides (Figures 4.81, 4.82, and 4.83) involves instructor MCSs (planning, monitoring, and evaluating) to use prior, during, and after teaching students. Participants discuss the modification and addition of other questions to these MCS lists. Instructor self-reflection questions are also listed in the Quick Reference Guide (see Appendix A, Figure A11).

Figure 4.81 Teacher Metacognition: Planning

Teacher Metacognition

Planning:

Learning Objectives
Students' background knowledge
Students' prior knowledge of strategies
Lesson modifications
Timing of activities
Anticipate student difficulties with the learning material

(Hartman, 2001 & Chamot et al., 2019)

Sequence of activities
Anticipate student questions
Student practice of skills
Skills assessment
Student self-assessment

See **Instructor Metacognitive Strategies for Self-Reflection** (Figure A11) in the Quick Reference Guide

Figure 4.82 Teacher Metacognition: Monitoring

Teacher metacognition

See **Instructor Metacognitive Strategies for Self-Reflection** (Figure A11) in the Quick Reference Guide

Monitoring:

Student understanding or misunderstanding of the material
Activity level matched to students' learning needs
Students on task
Student progress
Activity modification
Student encouragement
Student learning strategy choice/use

(Hartman, 2001 & Chamot et al., 2019)

Figure 4.83 Teacher Metacognition: Evaluating

Teacher Metacognition

Evaluating:

Lesson objectives were met
Incorporation of students' background knowledge
Time allotment for lesson/activities
Time management for lessons/activities
Student completion of self-assessment
Lesson strengths/weaknesses
Student time management
Student comprehension
Future lesson/activity modifications
Lesson feedback

See **Instructor Metacognitive Strategies for Self-Reflection** (Figure A11) in the Quick Reference Guide

(Hartman, 2001 & Chamot et al., 2019)

Hartman (2001) and Wilson and Conyers (2016) pointed out the differences between teaching with and teaching for metacognition. Participants can discuss both ideas and how to implement them into their instructional methods (Figures 4.84, 4.85, and 4.86).

Figure 4.84 Teacher Metacognition: Discussion

Teacher Metacognition

"Teaching metacognitively involves teaching *with* and *for* metacognition" (Hartman, 2001, p. 149).

How can you teach with metacognition?

How can you teach for metacognition?

Discuss in your groups.

Figure 4.85 Teaching with Metacognition

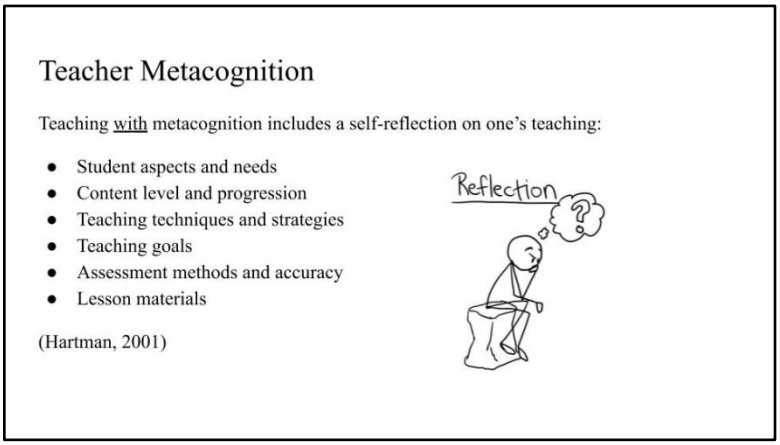
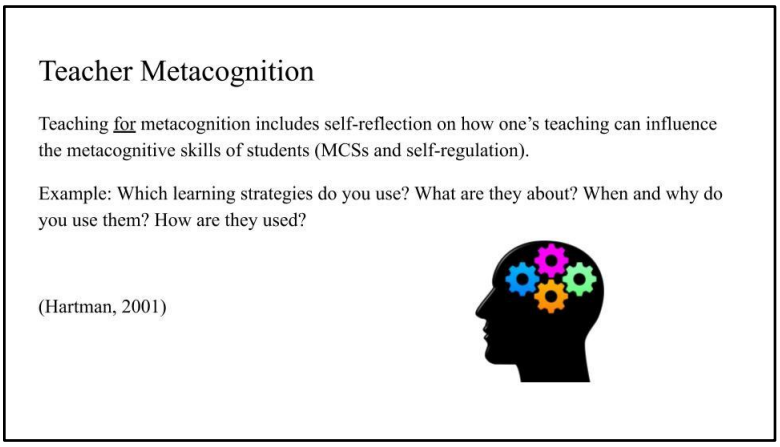


Figure 4.86 Teaching for Metacognition

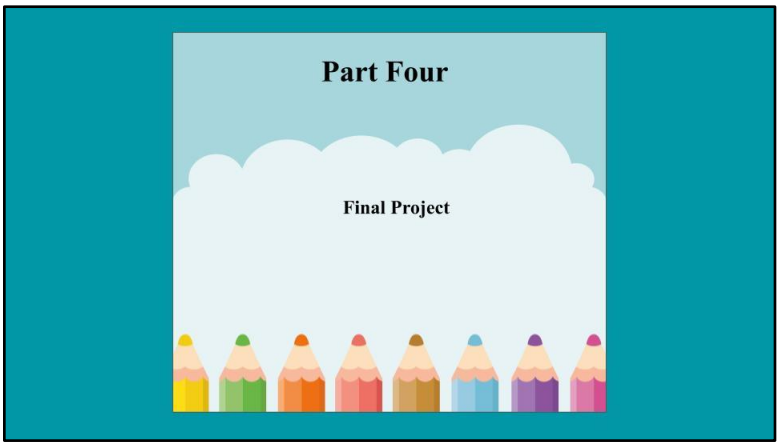

Teacher Metacognition
Teaching for metacognition includes self-reflection on how one's teaching can influence the metacognitive skills of students (MCSs and self-regulation).
Example: Which learning strategies do you use? What are they about? When and why do you use them? How are they used?
(Hartman, 2001)

In the next section (Figure 4.87), participants see an example activity (Figure 4.88) and discuss, consolidate, and present their knowledge of how to use MCSs with learning strategies to maximize student learning.

Part Four

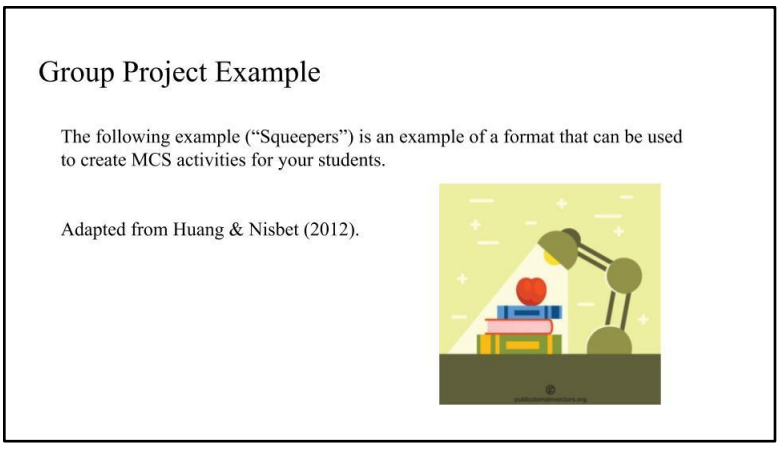
Final project.

Figure 4.87 Final Project



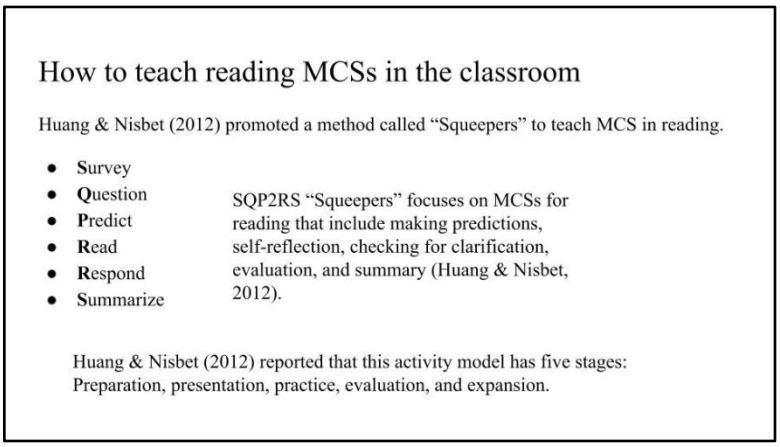
Huang and Nisbet's (2012) SQP2RS activity uses MCSs in reading and is based on the Cognitive Academic Language Learning Approach (CALLA) developed by Chamot and O'Malley (1994) and uses the framework therein which includes five stages: Preparation, presentation, practice, evaluation, and expansion.

Figure 4.88 Group Project Example


Group Project Example
The following example ("Squeepers") is an example of a format that can be used to create MCS activities for your students.
Adapted from Huang & Nisbet (2012).

Participants discuss the meaning of "Squeepers" and the idea that in the framework, the responsibility of learning is shifted to the students in stages, thus promoting learning independence and self-regulation (Chamot, 2009). Students can combine reading strategies with MCSs. The five stages of the model are also introduced (Figure 4.89).

Figure 4.89 "Squeepers"


How to teach reading MCSs in the classroom
Huang & Nisbet (2012) promoted a method called "Squeepers" to teach MCS in reading.
Survey
Question
Predict
Read
Respond
Summarize
SQP2RS "Squeepers" focuses on MCSs for reading that include making predictions, self-reflection, checking for clarification, evaluation, and summary (Huang & Nisbet, 2012).
Huang & Nisbet (2012) reported that this activity model has five stages: Preparation, presentation, practice, evaluation, and expansion.

Huang & Nisbet's (2012) "Squeepers" activity started with a preparation stage (Figure 4.90) in which teachers assess and facilitate students' metacognitive awareness. In this stage, students learn new strategies through the engagement of their background knowledge. Students also name and create a poster of their strategy to facilitate recall, e.g., SQP2RS (as shown in Figure 4.89). Instructors should provide positive encouragement to students who may be at lower reading levels, Huang and Nisbet (2012) promoted the instruction of why and how the use of MCSs can boost reading levels and can help allay student anxiety. Explicit instruction of MCSs can boost learning and reading comprehension for ELs at diverse reading levels (Cubukcu, 2008; Huang & Newbern, 2012; Rastegar et al., 2017; Rusciolelli, 1995; Teng & Reynolds, 2019).

Figure 4.90 "Squeepers": Preparation

How to teach reading MCSs in the classroom

Stage 1: Preparation

Metacognitive awareness (Questionnaires, informal inventories)
Background knowledge
Give positive encouragement (What can you tell students to lessen their anxiety?)

Adapted from Huang and Nisbet (2012).

Which questionnaire(s) would you consider giving students in this stage?
(See the **Quick Reference Guide, Figure A13**)

In the presentation stage (Figure 4.91), the instructor models the reading while using reading strategies.

Figure 4.91 "Squeepers": Presentation

How to teach reading MCSs in the classroom

Stage 2: Presentation

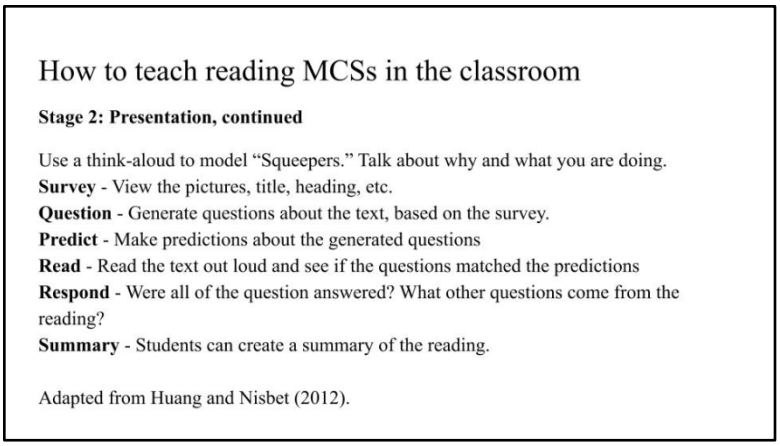
Explicitly teach and model the learning strategy to your students**.** Tell students how and why to use each strategy. Explain or have students brainstorm about what a reader should do before, during, and after reading for comprehension (skimming, predicting, etc.)

Adapted from Huang and Nisbet (2012).

The participants discuss how to explicitly add MCS instruction into the presentation section (Figure 4.92). For example, for planning, students can plan their activity and gather needed materials. In monitoring, students have an explanation from the instructor about focusing their attention to the task, as well as monitoring their comprehension of the task and the material.

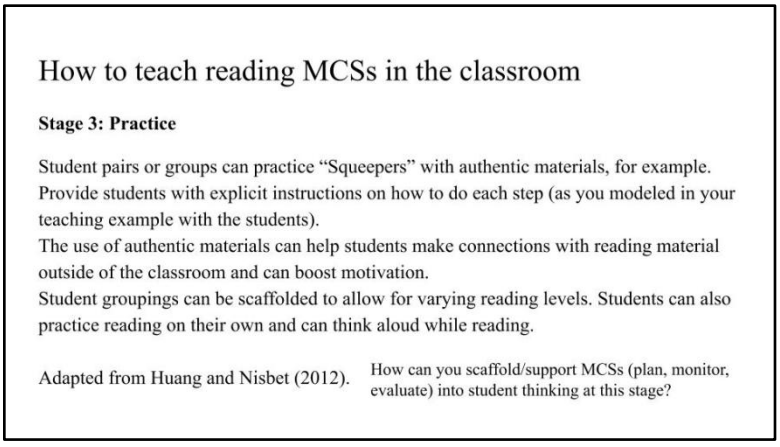
Evaluating can include an instructor think-aloud that consists of self-questioning their performance on this section of the activity or questioning and evaluating if their summary of the reading makes sense.

Figure 4.92 "Squeepers": Modeling


How to teach reading MCSs in the classroom
Stage 2: Presentation, continued
Use a think-aloud to model "Squeepers." Talk about why and what you are doing.
Survey - View the pictures, title, heading, etc.
Question - Generate questions about the text, based on the survey.
Predict - Make predictions about the generated questions
Read - Read the text out loud and see if the questions matched the predictions
Respond - Were all of the question answered? What other questions come from the reading?
Summary - Students can create a summary of the reading.
Adapted from Huang and Nisbet (2012).

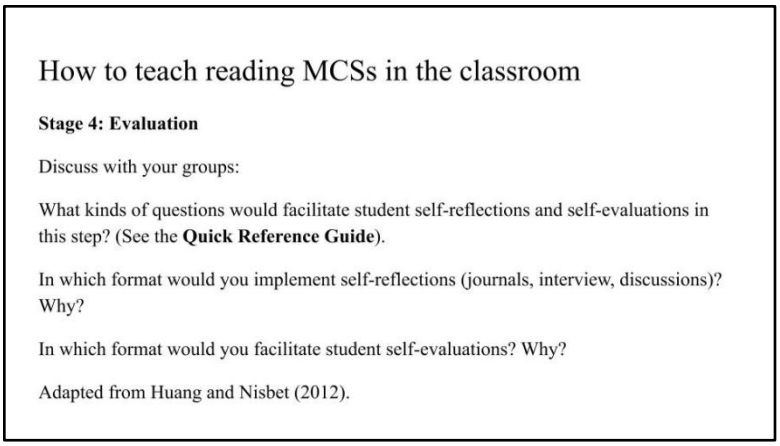
In the practice stage of the model (Figure 4.93) participants discuss EL engagement with reading materials using the "Squeepers" method.

Figure 4.93 "Squeepers": Practice


How to teach reading MCSs in the classroom
Stage 3: Practice
Student pairs or groups can practice "Squeepers" with authentic materials, for example.
Provide students with explicit instructions on how to do each step (as you modeled in your teaching example with the students).
The use of authentic materials can help students make connections with reading material outside of the classroom and can boost motivation.
Student groupings can be scaffolded to allow for varying reading levels. Students can also practice reading on their own and can think aloud while reading.
Adapted from Huang and Nisbet (2012).
How can you scaffold/support MCSs (plan, monitor, evaluate) into student thinking at this stage?

In group conversations, participants discuss how to facilitate student self-evaluations (Figure 4.94); for example, in the classroom, instructors can model self-reflection MCS questions for student journaling, discussions, or think-alouds.

Figure 4.94 "Squeepers": Evaluation


How to teach reading MCSs in the classroom

Stage 4: Evaluation

Discuss with your groups:

What kinds of questions would facilitate student self-reflections and self-evaluations in this step? (See the **Quick Reference Guide**).

In which format would you implement self-reflections (journals, interview, discussions)? Why?

In which format would you facilitate student self-evaluations? Why?

Adapted from Huang and Nisbet (2012).

Huang & Nisbet (2012) promoted the idea that adult ELs should be able to generalize and share strategy learning in social and in community contexts outside of the classroom (Figure 4.95). ELs are also encouraged to use various strategies and see which ones work the best for them. These expansion activities are used in class or small group discussions while the teacher works with students with limited reading skills.

Figure 4.95 "Squeepers": Expansion

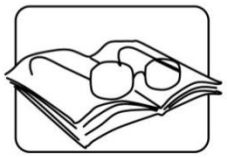
How to teach reading MCSs in the classroom

Stage 5: Expansion

Students can use "Squeepers" at home: magazines, books, newspapers, online, menus, etc., and can share their "Squeepers" experience with the class.

In what other ways can "Squeepers" be modified or expanded to use with different activities? Is this type of activity an effective way to teach MCSs? Why or why not?

Adapted from Huang and Nisbet (2012).



In a final group project (Figure 4.96), participants collaborate to create a lesson or activity that incorporates MCSs with the four domains. Participants choose a card out of a "hat" that lists either "beginning," "intermediate," or "advanced." This drawing is to ensure that all the learning levels are represented in the final projects. Participants are given a group project to complete that incorporates all learning from the workshop. Participants create a strategy like "Squeepers" to present to the class and can write their project on one of the large easel paper pads. Then, they post their papers from the pad on the wall and present their project.

Figure 4.96 Group Project

Group Project

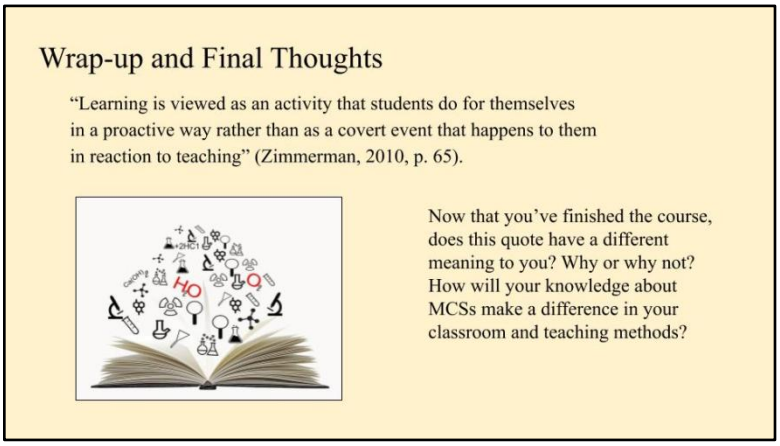
Work with your groups to create a lesson outline/plan, an activity, or a strategy like "Squeepers" for a beginning, intermediate, or advanced EL learning activity in one of the four domains. Incorporate MCSs in your lesson. The activity/lesson should last 25-30 minutes. Can you analyze your lesson/activity using MCSs?
How would you introduce or explain the importance of metacognition to your students?

You may want to create informal interview questions to learn how students approach strategies in general. How would this interview inform your approach to the lesson? Or, you could choose a specific, formal questionnaire that you would use.

Also, make a list of self-reflection questions for yourself using MCSs to use to journal about after you have given your lesson in the classroom with ELs. (reflect on how the lesson went, etc.)

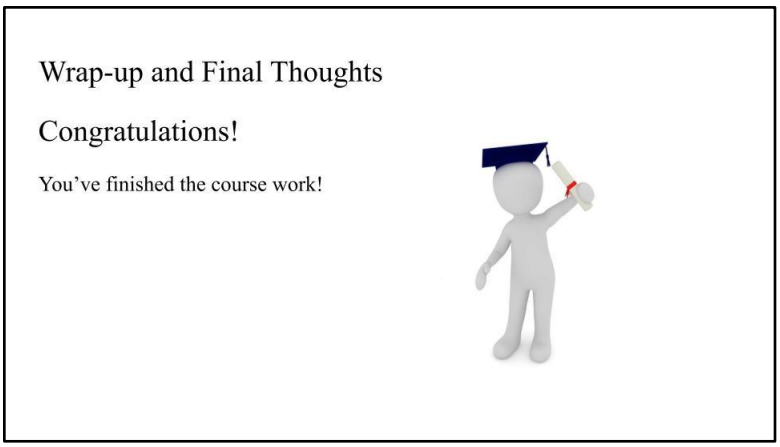
Participants have the opportunity to revisit the quote from the beginning of the workshop and to reflect on whether or not their perspectives on student independent learning with MCSs has changed from their earlier views, or if they have a deeper understanding of how to promote independent learning using MCSs (Figure 4.97).

Figure 4.97 Final Thoughts


Wrap-up and Final Thoughts
"Learning is viewed as an activity that students do for themselves in a proactive way rather than as a covert event that happens to them in reaction to teaching" (Zimmerman, 2010, p. 65).
Now that you've finished the course, does this quote have a different meaning to you? Why or why not? How will your knowledge about MCSs make a difference in your classroom and teaching methods?

The final workshop discussion allows participants to ask questions, clarify information, and conclude the course (Figure 4.98).

Figure 4.98 Wrap-Up



Chapter Five: Conclusion

This thesis project has given me the opportunity to explore the existing literature on the use of metacognitive strategies (MCSs) in the four language domains with L2 learners, specifically, adult ELs. This research has expanded my knowledge of MCS use and has helped me develop a deeper understanding of how to approach ESL/EFL teaching. After all, "...metacognition is at the heart of...learning and teaching students to think" (Wilson & Conyers, 2016, p. 13).

Metacognition can be succinctly described as thinking about thinking. It is a valuable tool to use with adult L2 students, especially in collaboration with peers and in combination with other learning strategies, since metacognitive thinking and reflection can raise awareness of how and when to use such strategies (Huang & Newbern, 2012; Liu & Goh; Macaro, 2006; Nakatani, 2005; Vandergrift, 2003; Teng, 2019a; Teng & Reynolds, 2019). ELs should know how to use a variety of learning strategies that can boost their achievement outcomes, and with explicit teaching of the use of MCSs, students can know how to approach learning tasks, and with which strategies (Anderson, 2002). This metacognitive awareness and use can promote student achievement at all stages, but is especially beneficial to students who are less skilled learners or are at beginning L2 levels (Bozorgian, 2012; Hattie 2009; Huang & Newbern, 2012; Vandergrift, 2003; Veenman & Elshout, 1999; Wilson & Conyers, 2016).

Furthermore, explicit instruction of these types of strategies is more effective than implicit instruction (Grenfell & Harris, 2017) and MCSs should be included with content with practice and review (Veenman et al., 2006). For example, instructors who use teaching tools that are included in this project such as MCS questionnaires and self-reflection questions for

journaling and discussion can maximize student learning (Zhang & Goh, 2006). Explicit instruction of MCSs is necessary because while some students can learn these strategies independently, many do not and need to be taught (Pintrich, 2002).

Self-reflection and self-regulation are key parts of MCS use and include the ability to control one's learning through planning, monitoring, evaluating, and choosing strategies. The inclusion of these MCSs in classroom tasks in combination with other learning strategies has a significant effect on increasing academic achievement and performance (Anderson, 2002, Wilson & Conyers, 2016), as compared to a sole reliance on strategies or activities that promote classroom input and interaction without the use of MCSs (Graham, 1997; Liu & Goh, 2006; Teng, 2019a; Vandergrift, 2003). In other words, through the use of multiple strategies, students who know how to control their learning processes, gauge and implement what comes next, and know whether or not their answers are correct are well on their way to becoming successful learners (Hattie, 2012). Additionally, instructors should also have awareness of a multitude of learning strategies since students (and teachers) may need different strategies at varying times (Hartman, 2001).

However, metacognition has not had a consistent presence in adult EL classrooms (Goh & Burns, 2012; Liu & Goh, 2006) since many teachers may lack awareness of this strategy (Harman, 2001). The use of MCSs is an effective way to facilitate student-teacher conversations and student group discussions to reflect on learning and mistakes in an attempt to understand the learning process and the feasibility of one's efforts or of a specific strategy (Hattie & Zierer, 2018). Additionally, the use of MCSs combined with language knowledge promotes proficiency in the language domains (Ghapanchi & Taheryan, 2012). Therefore, this project is a gathering of research-based strategies and activities to help EFL and ESL instructors gain knowledge about

MCSs and be able to promote and expand the independent learning skills of their students through MCS use, self-reflection, and group work, which have had significant effects on student achievement (Huang & Newbern, 2012; Liu & Goh, 2006; Nakatani, 2005; Teng, 2019a; Teng & Reynolds, 2019; Vandergrift & Goh, 2003). I hope to inform instructors of how they can explicitly promote the use of MCSs within the four language domains in their classrooms. While the compilation of resources in this project is not exhaustive, I hope that the workshop presentation and reference guide booklet can provide instructors with pedagogical knowledge and resources for further research into metacognition with ELs. The section on teacher metacognition can facilitate instructor self-reflection on their lesson plans, materials, and classroom management to aid in professional development and learning.

Future research could include teachers' perceptions of their use of self-reflection with MCSs when planning lessons and teaching classes with adult ELs. Additionally, further studies could explore the effects of MCS use within each language domain with specific cognitive strategies such as using imagery for memorization or the use of mind maps with a particular task, for example.

Appendix A: Quick Reference Guide for Instructors

Quick Reference Guide for Instructors

Metacognitive Strategies and Resources for Adult EL Classrooms

Table of Contents

About the Quick Reference Guide 100

Metacognition Overview 100

Figure A1 Learning Strategy Application Model 101

Figure A2 General Metacognitive Strategies 102

Figure A3 Self-Regulation Questions 103

Figure A4 Metacognitive Strategies for Writing 104

Figure A5 Self-Reflection for Writing Tasks 105

Figure A6 Metacognitive Strategies for Reading 106

Figure A7 Metacognitive Strategies for Listening 107

Figure A8 Journal Prompts for Student Self-Reflection of Listening Tasks 108

Figure A9 More Journal Prompts for Student Self-Reflection of Listening Tasks 108

Figure A10 Student Journal Prompts Model for Speaking Strategies and MCSs 109

Figure A11 Instructor Metacognitive Strategies for Self-Reflection 112

Figure A12 Interview Questions for General Strategy Use 113

Figure A13 Standardized MCS Questionnaires 114

Strategy Inventory for Language Learning (SILL)

Survey of Reading Strategies (SORS)

Writing Strategies for Self-Regulated Learning Questionnaire (WSSRLQ)

Metacognitive Awareness Listening Questionnaire (MALQ)

Metacognitive Awareness Inventory in Listening and Speaking Strategies (MAILSS)

Metacognitive Awareness Inventory (MAI)

Metacognitive Awareness Inventory for Teachers (MAIT)

Thinking About Teaching Strategies (TATS)

Notes 118

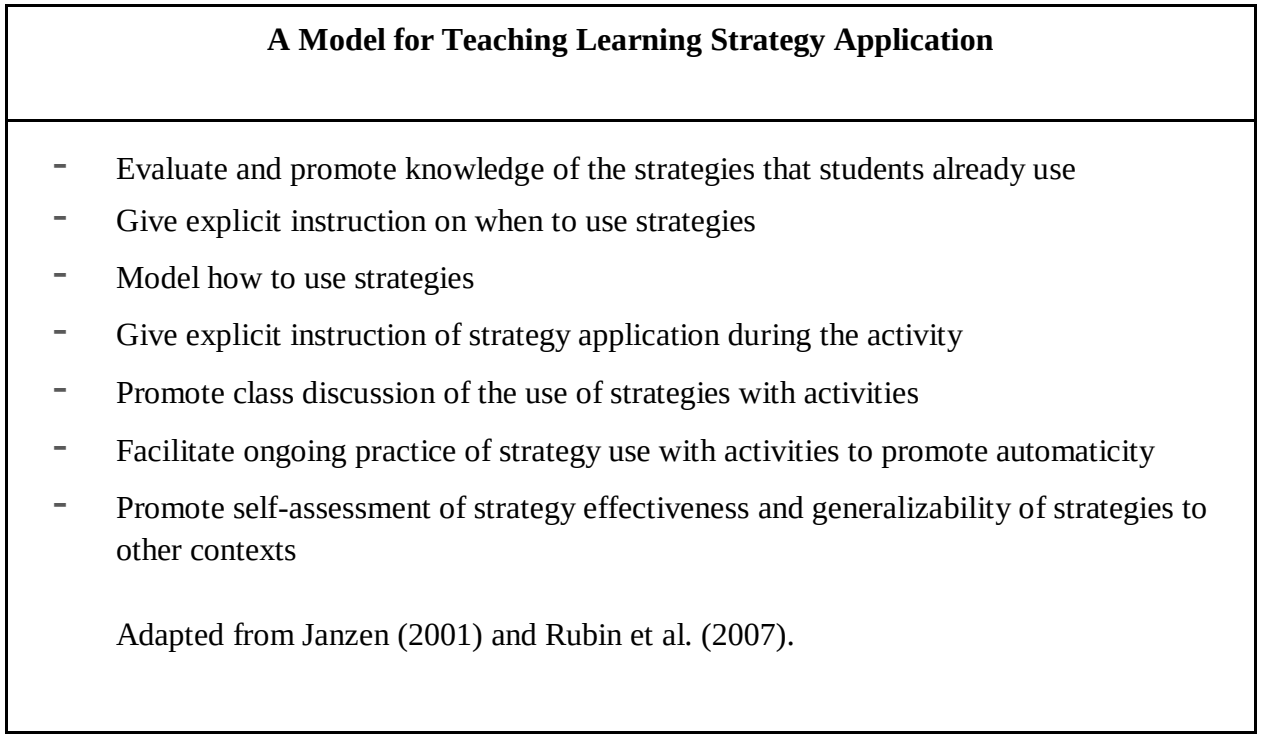
About the Quick Reference Guide

This guide is meant to be used in classrooms and learning contexts as a resource for metacognitive strategies (MCSs), self-reflection, and lists of questionnaires for ascertaining student metacognitive awareness and strategy use. This guide is not an exhaustive collection of metacognitive resources and should be considered only as a starting point for further research if desired. Additionally, the lists of MCS examples are fluid and can be used as a "mix and match" to fit students' needs.

Metacognition Overview

Metacognition is thinking about cognition or thinking about thinking as one does an activity. It involves the preparation and planning, evaluating, monitoring, and summarizing of tasks (Veenman & Elshout, 1999). This resource list focuses on teaching learning strategy application with MCSs for the four language domains: reading, writing, listening, and speaking.

Figure A1 Learning Strategy Application Model



A Model for Teaching Learning Strategy Application

- Evaluate and promote knowledge of the strategies that students already use
- Give explicit instruction on when to use strategies
- Model how to use strategies
- Give explicit instruction of strategy application during the activity
- Promote class discussion of the use of strategies with activities
- Facilitate ongoing practice of strategy use with activities to promote automaticity
- Promote self-assessment of strategy effectiveness and generalizability of strategies to other contexts

Adapted from Janzen (2001) and Rubin et al. (2007).

Figure A2 General Metacognitive Strategies

Planning	Monitoring	Evaluating
Do I know what the activity/task is about?	Do I understand the task as I am doing it?	Was I successful in meeting the goal(s) of the task?
What is the goal of the task?	Does my output make sense? Is the meaning clear?	What helped me meet the goals of the task?
Does this task have any similarities with previous ones? Any differences?	Does the activity make sense?	What didn't help?
How much time will I need to do the activity?	Am I making good progress towards the task goal(s)?	Do I need to make changes next time? If so, what?
Which strategies will work for this task?	What do I need to change to make the process work better?	Do I need to make new learning goals?
Do I need other resources or information?	Do I need new strategies?Do I need to change my approach?	Adapted from Schraw, G. (2002) and Teng (2019a).

Figure A3 Self-Regulation Questions

Self-Regulation Questions
Zheng & Zheng (2019) referred to the self-reflection process as a part of self-regulation, which is inter-connected with metacognition. Self-Regulation includes MCSs like the ones above, plus self-reflection questions such as the ones below:
What did I learn? How did I learn it? What was my learning process? What are my strengths and weaknesses? Which strategies worked the best for me in the task? Were my chosen strategies effective in completing the task?
(Anderson, 2005; Chamot & Kupper, 1989; Efklides, 2008; Goh & Burns, 2012; Hattie, 2009; Teng, 2019a; Vandergrift & Goh, 2016; Veenman & Elshout, 1999).

Figure A4 Metacognitive Strategies for Writing

Planning	Monitoring	Evaluating
What is the writing task about? Who is it for? (audience) What are my writing goals? How much time will I need to complete the writing task? Which strategies will I use? Do I have the needed resources, materials, and information? Adapted from Lee and Mak (2018).	Is the meaning and purpose of my writing clear? Does it make sense? Am I addressing my target audience? Is my language use and tone appropriate for the task? Am I using effective writing strategies? What difficulties do I have with this writing task? How can I resolve them? Are my writing goals being met? Do I need to change strategies? Do I need to modify my writing approach?	Were my writing goals achieved? Should I have new writing goals? Which ones? What were my strengths and weaknesses for the writing task? What should I do differently next time? What worked? What did not work?

Figure A5 Self-Reflection for Writing Tasks

Individual	Group Feedback
Are my paragraphs spaced correctly? Is my page formatted correctly? Does my writing make sense? Is it logical? Is it clear? Are my arguments sound, or should I choose another argument? What is my argument? Did I use my references and resources correctly? What is my conclusion? Adapted from Teng (2019a).	Did I read my group members' writings? Did I check the writing for mistakes? Is the writing easy to understand and logical? Should my group member make any corrections or changes to their writing content or grammar?

Figure A6 Metacognitive Strategies for Reading

Fill in the chart (or a sheet of paper) based on your group work.

Planning	Monitoring	Evaluating

Figure A7 Metacognitive Strategies for Listening (Student-Led Listening Reflection Guide)

Planning	Monitoring	Evaluating
Why am I listening to this audio text or speaker? What process will I take to meet my listening goals? Do I have any prior knowledge about this subject? What predictions do I have about the vocabulary, information, or content? Which listening strategies should I use? Do I anticipate any difficulties with this listening task? How can I overcome them? Do I have the resources that I need for the task? Adapted from Liu and Goh (2006).	Fill in this monitoring section based on your group activity.	Did my listening difficulties match what I expected? What were my strengths for this task? Did I comprehend the listening material? Did my strategies work? Do I need to make changes to my strategies? What should I do differently for future listening tasks?

Figure A8 Journal Prompts for Student Self-Reflection of Listening Tasks

What did you think of the listening activity? Why did you think that?

Did the activity help you improve your listening skills? Why or why not?

Which strategies did you use to understand what you heard?

Which strategies worked well to improve your listening skills? Which ones did not work well?

Which strategies will you use next time? Why?

Adapted from Liu and Goh (2006).

Figure A9 More Journal Prompts for Student Self-Reflection of Listening Tasks

What did you do to prepare to listen to the passage?

What steps did you take to comprehend the listening passage?

Did you understand the passage? How did you check your understanding?

List any issues or difficulties that you had during this activity.

List the strengths that you had in completing this task.

Adapted from Liu and Goh (2006).

Figure A10 Student Journal Prompts Model for Speaking Strategies and MCSs

Review/Warm up	What was the last lesson/class about? What did you learn? How did you use it?
Lesson Objectives	What is the learning objective in the task? For example, grammar, expressions, phrases, etc.
MCSs:	
<u>Before the task/activity (Plan)</u>	
Plan strategy use:	Have I done an activity like this before? What do I know about the activity? Which speaking strategies do I plan to use?
Learning goals:	What do I expect to learn in this activity? (personal goal) What materials/resources do I need?
Language/Speaking information:	Do I know the grammar, pronunciation, vocabulary, phrases, expressions, etc. for this task? What should I be prepared to use/know?
Speaking partner interaction:	How should I interact with/respond to my partner?
Content awareness:	Am I familiar with the content of the activity? What is the subject/topic of the activity?

<u>During the task/activity (Monitor)</u>	
Monitor interaction with your partner:	How am I interacting with my partner? (e.g., taking turns, waiting for my partner's question/response, etc.)
Monitor speaking strategy use: **(List speaking strategies here)**	Which speaking strategies are working for me? Which ones am I using? Do I need to use new/different strategies?
Monitor understanding and speaking abilities:	Does my partner understand what I am saying? Am I meeting the speaking goals and learning objectives of the task? Do I need to adjust my speaking (e.g., more talking, less talking, pronunciation, use of grammar/expressions, etc.)?
After the task/activity (Evaluate)	
Performance review:	Did my partner understand what I said? Did I meet the speaking goals and learning objectives of the task? If not, what do I need to do to meet the objectives? Did I meet my personal learning goals? If not,

	what do I need to do to meet my goals? Did I have the needed resources/materials? What were my strengths and weaknesses for this task?
Strategy review: Adapted from Nakatani (2005)	Which speaking strategies did I use to help me speak to my partner? Which ones helped to improve my speaking skills? Which ones did not help?

Figure A11 Instructor Metacognitive Strategies for Self-Reflection

Planning	Monitoring	Evaluating
What are the learning objectives for your lesson? Do you know the students' background knowledge of the material and how will you facilitate its use? How will you learn students' prior knowledge of strategies and language? Have you considered modifications (Plan B) if the originally chosen strategies don't work? How have you timed and sequenced the activities? Which activities will you use, and have you planned in advance for student questions or difficulties with learning the material? How will students practice learning strategies and language skills? How will you assess student learning? How can students assess their learning of language skills and strategy use?	Do the students understand the material? Do students have any misunderstandings of the material? Does the activity seem too easy or too hard for the learning objective? Are the students staying on task and making progress with the activity or does it need modification to guide student learning? How can you encourage students to choose the strategies that work best for them for the learning task? Adapted from Hartman (2001) and Chamot et al. (2019).	Were the lesson objectives met? Did you incorporate students' background knowledge? What were the strengths and weaknesses of the learning activities or lesson plan? Was enough time allotted for the activity? Did you stay on track with the lesson? Did the students stay on track? Did the students comprehend the learning tasks? What would you do differently next time? Do you need to revise the lesson plan or learning activities? How can you get feedback on your lesson process to facilitate improvements or changes? Were students able to assess their learning of language skills and strategy use with this lesson?

Figure A12 Interview Questions for General Strategy Use

Interview Questions for General Strategy Use
(For each blank, insert either reading, writing, listening, or speaking). Instructors can use this guide to create and customize interviews for their classrooms. This survey can also be customized to be more specific to a learning domain. For example, "How do you learn the meaning of new vocabulary words?" and "What do you do if you don't know how to pronounce a word?"
Do you use strategies for learning in _____ (reading, writing, listening, speaking) classes? If so, which ones? Do you plan your _____ tasks? How so? Do you check your progress in _____ tasks as you do them? How so? Do you make corrections in your _____ tasks? How so? What difficulties do you have with _____ tasks? How do you solve these difficulties? Do you ask for assistance with difficult tasks? Why or why not? What motivates you when learning _____ ? Why?
Adapted from (Teng & Zhang, 2016).

Figure A13 Standardized MCS Questionnaires

Strategy Inventory for Language Learning (SILL)	This standardized inventory has a version for ELs and contains questions such as "I review English lessons often," or "I try to find patterns in English" (Oxford, 1990, p. 294-295). The SILL has been used to show correlations between strategy use and gender, learning styles and levels, culture, and learning activities. The inventory gathers information about ELs' use of strategies such as recall, learning organization, collaboration and includes cognitive, metacognitive, and social contexts (Oxford, 1990).
Writing Strategies for Self-Regulated Learning Questionnaire (WSSRLQ)	This validated questionnaire can provide an opportunity for EFL students' awareness of writing strategies they use in respect to metacognition, cognition, and social and motivational contexts. Collaborative learning and use of MCSs during writing tasks were significantly correlated in Teng and Zhang's (2016) study using this questionnaire. Furthermore, this tool can also facilitate instructor modification of teaching interventions and can inform teachers as to which strategies their students employ during writing tasks (Teng & Zhang, 2016).
Survey of Reading Strategies (SORS)	This questionnaire gathers information about ELs' metacognitive strategy knowledge and use in reading and has been tested for reliability and validity. The SORS measures metacognition and reading strategies in general along with MCS that aid in problem-solving and provide support. The questionnaire also queries whether ELs engage in translating or thinking in dual languages during reading tasks. The information gathered within this surgery can inform teachers and students about useful reading strategies for L2 learners (Mokhtari & Sheorey, 2002)

Metacognitive Awareness Listening Questionnaire (MALQ)	Vandergrift et al. (2006) developed the 21-item Metacognitive Awareness Listening Questionnaire (MALQ) that assesses L2 student awareness of metacognitive listening strategies and can inform teachers how to facilitate listening comprehension in classroom learning. Students can use the questionnaire to assess and reflect on their understandings of the processes involved in listening tasks and their use of MCSs during these tasks (Vandergrift et al., 2006). The MALQ was initially used with French language students but was subsequently used with ELs by Goh and Hu (2014). Goh and Hu (2014) found that ELs who used the MALQ as a prompt for reporting their use of MCSs during listening tasks were aware of their difficulties with listening and of the processes, but more often used their metacognitive skills in problem-solving and directed attention than evaluation or planning. The study also showed that success in listening tasks was correlated to metacognitive awareness and explicit instruction of MCSs for learning how to listen (Goh & Hu, 2014).
Metacognitive Awareness Inventory in Listening and Speaking Strategies (MAILSS)	The 40-item MAILSS allows ELs to rank the usefulness of strategies and examines students' self-reported knowledge and use of learning strategies for listening and speaking in communication, comprehension, language form, and language use. Zhang and Goh (2006) reported that knowledge of strategies and their perceived usefulness are positively and significantly correlated. Students endorsed using strategies such as asking for repetition and explanation, and paraphrasing. MCSs and cognitive strategies were among students' choice of strategies that included prediction, inference, use of prior knowledge, focused attention, and using language in context. Students in Zhang and Goh's (2006) study reported that strategies that focus on language use, e.g.,

	seeking opportunities to practice speaking or participating in classroom discussions, were more important than pronunciation or grammar practice. (maybe connected to discussions and MCS?) Students also reported that listening to and/or watching TV or radio in English helped to develop their L2 skills (Zhang & Goh, 2006). This study can inform instructors in their efforts to instruct learning strategies and to help students plan their strategy use.
Metacognitive Awareness Inventory (MAI)	This validated inventory was designed for adults and K-12 learners. It gathers self-reported information from students about their self-regulation and knowledge of MCSs. Schraw and Dennison (1994) found that the MAI shows significant correlations between a student's awareness of strategies and when and how to use them, and MCS use (planning, evaluating, monitoring, assessing). Schraw and Dennison (1994) suggested that the MAI can be used with adult students to inform explicit MCS instruction, and can also help identify students at lower learning levels that may need beginning-level work with various learning strategies.
Metacognitive Awareness Inventory for Teachers (MAIT)	Balcikanli (2011) modified Schraw and Dennison's (1994) MAI and developed the MAIT to promote teacher awareness of their own metacognition. This 24-item inventory has been tested for reliability and validity and has sections that include items for declarative, procedural, and conditional knowledge, along with metacognitive strategy use (planning, monitoring, and evaluating). Kallio et al. (2017) made a shorter version, the MAIT-18, and reported higher validity in this modified inventory.
Thinking About Teaching Strategies (TATS)	The TATS is a list of 40 items that instructors can use to self-reflect on their typical teaching strategies and rank them as "very typical," "not very typical," "somewhat

	typical," or "don't know" (Hartman, 2001, p. 171). The inventory includes items such as "Demonstrate to students how they should approach tasks," or "Develop ideas gradually, building from the simple to the complex" (Hartman, 2001, p. 171). This self-reflection inventory promotes instructor knowledge of when and why to use particular classroom strategies or activities and facilitates a metacognitive approach to teaching. After instructors complete self-reflections, group discussions are helpful to develop deeper understandings of strategy use, advantages/disadvantages, and adaptations through declarative, contextual, and procedural knowledge (Hartman, 2001).

NOTES

NOTES

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